

11/24/5136

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:sssptaul56cxh

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

\*\*\*\*\* Welcome to STN International \*\*\*\*\*

NEWS 1 Web Page for STN Seminar Schedule - N. America  
NEWS 2 MAR 15 WPIDS/WPIX enhanced with new FRAGHITSTR display format  
NEWS 3 MAR 16 CASREACT coverage extended  
NEWS 4 MAR 20 MARPAT now updated daily  
NEWS 5 MAR 22 LWPI reloaded  
NEWS 6 MAR 30 RDISCLOSURE reloaded with enhancements  
NEWS 7 APR 02 JICST-EPLUS removed from database clusters and STN  
NEWS 8 APR 30 GENBANK reloaded and enhanced with Genome Project ID field  
NEWS 9 APR 30 CHEMCATS enhanced with 1.2 million new records  
NEWS 10 APR 30 CA/Capplus enhanced with 1870-1889 U.S. patent records  
NEWS 11 APR 30 INPADOC replaced by INPADOCDB on STN  
NEWS 12 MAY 01 New CAS web site launched  
NEWS 13 MAY 08 CA/Capplus Indian patent publication number format defined  
NEWS 14 MAY 14 RDISCLOSURE on STN Easy enhanced with new search and display fields  
NEWS 15 MAY 21 BIOSIS reloaded and enhanced with archival data  
NEWS 16 MAY 21 TOXCENTER enhanced with BIOSIS reload  
NEWS 17 MAY 21 CA/Capplus enhanced with additional kind codes for German patents  
NEWS 18 MAY 22 CA/Capplus enhanced with IPC reclassification in Japanese patents  
NEWS 19 JUN 18 CA/Capplus to be enhanced with pre-1967 CAS Registry Numbers  
  
NEWS EXPRESS NOVEMBER 10 CURRENT WINDOWS VERSION IS V8.01c, CURRENT  
MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),  
AND CURRENT DISCOVER FILE IS DATED 25 SEPTEMBER 2006.  
  
NEWS HOURS STN Operating Hours Plus Help Desk Availability  
NEWS LOGIN Welcome Banner and News Items  
NEWS IPC8 For general information regarding STN implementation of IPC 8

Enter NEWS followed by the item number or name to see news on that specific topic.

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

\*\*\*\*\* STN Columbus \*\*\*\*\*

FILE 'HOME' ENTERED AT 18:44:27 ON 26 JUN 2007

for Connie

11/245136

=> file reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.21

0.21

FILE 'REGISTRY' ENTERED AT 18:45:16 ON 26 JUN 2007

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2007 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 25 JUN 2007 HIGHEST RN 939040-66-1

DICTIONARY FILE UPDATES: 25 JUN 2007 HIGHEST RN 939040-66-1

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH December 2, 2006

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=> s allylamine

L1 1332 ALLYLAMINE

=> s l1 and poly

1839686 POLY

L2 505 L1 AND POLY

=> s methylcarboxy and l2

19 METHYLCARBOXY

L3 0 METHYLCARBOXY AND L2

=> file caplus

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

15.30

15.51

FILE 'CAPLUS' ENTERED AT 18:45:45 ON 26 JUN 2007

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

COPYRIGHT (C) 2007 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is held by the publishers listed in the PUBLISHER (PB) field (available for records published or updated in Chemical Abstracts after December 26, 1996), unless otherwise indicated in the original publications. The CA Lexicon is the copyrighted intellectual property of the American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is

for Connie

11/245136

strictly prohibited.

FILE COVERS 1907 - 26 Jun 2007 VOL 147 ISS 1  
FILE LAST UPDATED: 25 Jun 2007 (20070625/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply.  
They are available for your review at:

<http://www.cas.org/infopolicy.html>

=> s amine and protective

279587 AMINE

233684 PROTECTIVE

L4 3094 AMINE AND PROTECTIVE

=> s 14 and allyl

106612 ALLYL

L5 109 L4 AND ALLYL

=> s 15 and poly

705041 POLY

L6 3 L5 AND POLY

=> d all 1-3

L6 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2004:252464 CAPLUS

DN 140:255816.

ED Entered STN: 26 Mar 2004

TI Multistage gas generator with multiple chambers, propellants, and separate initiation

IN Daoud, Sami

PA Textron Systems Corporation, USA

SO PCT Int. Appl., 47 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM C06D005-06

ICS F42B012-58; F42B010-56; B60R021-26

CC 50-1 (Propellants and Explosives)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004024653	A2	20040325	WO 2003-US28373	20030910
	WO 2004024653	A3	20040923		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW,			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	US 2004050283	A1	20040318	US 2002-242742	20020912
	US 6918340	B2	20050719		
	US 2004056458	A1	20040325	US 2002-242494	20020912
	US 6877435	B2	20050412		
	AU 2003270501	A1	20040430	AU 2003-270501	20030910

for Connie

11/245136

EP 1539657	A2	20050615	EP 2003-752198	20030910
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				
IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
JP 2005538834	T	20051222	JP 2004-536442	20030910
PRAI US 2002-242494	A	20020912		
US 2002-242742	A	20020912		
WO 2003-US28373	W	20030910		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2004024653	ICM	C06D005-06
	ICS	F42B012-58; F42B010-56; B60R021-26
	IPCI	C06D0005-06 [ICM,7]; C06D0005-00 [ICM,7,C*]; F42B0012-58 [ICS,7]; F42B0012-02 [ICS,7,C*]; F42B0010-56 [ICS,7]; F42B0010-00 [ICS,7,C*]; B60R0021-26 [ICS,7]
	IPCR	B01J0007-00 [I,C*]; B01J0007-00 [I,A]; B60R0021-20 [I,C*]; B60R0021-20 [I,A]; B60R0021-26 [I,C*]; B60R0021-26 [I,A]; C06B0025-00 [I,C*]; C06B0025-00 [I,A]; C06B0031-00 [I,C*]; C06B0031-28 [I,A]; C06B0031-32 [I,A]; C06D0005-00 [I,C*]; C06D0005-00 [I,A]; C06D0005-06 [I,A]; F42B0003-00 [I,C*]; F42B0003-04 [I,A]; F42B0010-00 [I,C*]; F42B0010-56 [I,A]; F42B0012-02 [I,C*]; F42B0012-60 [I,A]
	ECLA	B60R021/20D2; B60R021/26D2; C06D005/06; F42B003/04; F42B010/56; F42B012/60; B60R021/217D; B60R021/264C; B60R021/264C3
US 2004050283	IPCI	F42C0019-08 [ICM,7]; F42C0019-00 [ICM,7,C*]
	IPCR	B60R0021-26 [I,C*]; B60R0021-26 [I,A]; C06D0005-00 [I,C*]; C06D0005-06 [I,A]; F42B0003-00 [I,C*]; F42B0003-04 [I,A]; F42B0010-00 [I,C*]; F42B0010-56 [I,A]; F42B0012-02 [I,C*]; F42B0012-60 [I,A]
	NCL	102/489.000
	ECLA	B60R021/26D2; C06D005/06; F42B003/04; F42B010/56; F42B012/60; B60R021/264C; B60R021/264C3
US 2004056458	IPCI	C06D0005-00 [ICM,7]; C06B0031-28 [ICS,7]; C06B0031-00 [ICS,7,C*]; C06B0025-34 [ICS,7]; C06B0025-00 [ICS,7,C*]
	IPCR	B60R0021-20 [I,C*]; B60R0021-20 [I,A]; B60R0021-26 [I,C*]; B60R0021-26 [I,A]; C06D0005-00 [I,C*]; C06D0005-06 [I,A]
	NCL	280/736.000
	ECLA	B60R021/20D2; B60R021/26D2; C06D005/06; B60R021/217D; B60R021/264C; B60R021/264C3
AU 2003270501	IPCI	C06D0005-06 [ICM,7]; C06D0005-00 [ICM,7,C*]; F42B0012-58 [ICS,7]; F42B0012-02 [ICS,7,C*]; F42B0010-56 [ICS,7]; F42B0010-00 [ICS,7,C*]; B60R0021-26 [ICS,7]
	IPCR	B01J0007-00 [I,C*]; B01J0007-00 [I,A]; B60R0021-20 [I,C*]; B60R0021-20 [I,A]; B60R0021-26 [I,C*]; B60R0021-26 [I,A]; C06B0025-00 [I,C*]; C06B0025-00 [I,A]; C06B0031-00 [I,C*]; C06B0031-28 [I,A]; C06B0031-32 [I,A]; C06D0005-00 [I,C*]; C06D0005-00 [I,A]; C06D0005-06 [I,A]; F42B0003-00 [I,C*]; F42B0003-04 [I,A]; F42B0010-00 [I,C*]; F42B0010-56 [I,A]; F42B0012-02 [I,C*]; F42B0012-60 [I,A]
EP 1539657	IPCI	C06D0005-06 [ICM,7]; C06D0005-00 [ICM,7,C*]; F42B0012-58 [ICS,7]; F42B0012-02 [ICS,7,C*]; F42B0010-56 [ICS,7]; F42B0010-00 [ICS,7,C*]; B60R0021-26 [ICS,7]
	IPCR	B01J0007-00 [I,C*]; B01J0007-00 [I,A]; B60R0021-20

for Connie

[I,C\*]; B6OR0021-20 [I,A]; B6OR0021-26 [I,C\*];  
 B6OR0021-26 [I,A]; C06B0025-00 [I,C\*]; C06B0025-00  
 [I,A]; C06B0031-00 [I,C\*]; C06B0031-28 [I,A];  
 C06B0031-32 [I,A]; C06D0005-00 [I,C\*]; C06D0005-00  
 [I,A]; C06D0005-06 [I,A]; F42B0003-00 [I,C\*];  
 F42B0003-04 [I,A]; F42B0010-00 [I,C\*]; F42B0010-56  
 [I,A]; F42B0012-02 [I,C\*]; F42B0012-60 [I,A]  
 ECLA B6OR021/217D; B6OR021/264C; B6OR021/264C3; C06D005/06;  
 F42B003/04; F42B010/56; F42B012/60  
 JP 2005538834 IPCI B01J0007-00 [ICM,7]; B6OR0021-26 [ICS,7]; C06B0025-00  
 [ICS,7]; C06B0031-28 [ICS,7]; C06B0031-32 [ICS,7];  
 C06B0031-00 [ICS,7,C\*]; C06D0005-00 [ICS,7]  
 FTERM 3D054/DD17; 3D054/DD21; 3D054/DD22; 3D054/DD28;  
 3D054/FF15; 3D054/FF18; 4G068/DA08; 4G068/DA10;  
 4G068/DB10; 4G068/DB30; 4G068/DD15  
 AB A multichamber gas generator unit is characterized by having two or more  
 compartments, each with a sep. initiator, in which the propellants may  
 have different geometries, can be initiated at different times, and can  
 have different rates of gas evolution. The compns. can be varied to  
 tailor different rates of gas production (e.g., to produce a rapid initial  
 inflation, followed by a more gradual inflation rate in subsequent  
 stages). Propellant compns. can be comprised of an oxidizer 84-95, a fuel  
 3.4-13.4, and a binder 1.5-2.6 weight%, and can include: (1) fuels, such as  
 CL-20, RDX, HMX, GAP, NGU, TATB, LLM-105, and EDNA, (2) binders, such as  
 polycaprolactone, polyisobutene, glycidyl azide polymer, and poly  
 (vinylpyrrolidone), and ammonium nitrate oxidizer. Addnl. components  
 include a flash suppressant (e.g., potassium nitrate), stabilizers (Et  
 centralite, Acardite, diphenylamine, etc.), combustion inhibitors for  
 control of ballistic spikes and an inordinately high initial pressure  
 rise, d.-adjusting agents, static dissipators, etc.  
 ST gas generator propellant multiple chamber initiation; nitramine fuel gas  
 generator propellant multiple initiation  
 IT Polyesters, uses  
 RL: NUU (Other use, unclassified); TEM (Technical or engineered material  
 use); USES (Uses)  
 (combustion inhibitors and binders; multistage gas generator with  
 multiple chambers, propellants, and sep. initiation)  
 IT Propellants (fuels)  
 (composite, gas-generating; multistage gas generator with multiple  
 chambers, propellants, and sep. initiation)  
 IT Polyoxyalkylenes, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (energetic, binders; multistage gas generator with multiple chambers,  
 propellants, and sep. initiation)  
 IT Airbags (protective)  
 (inflation of; multistage gas generator with multiple chambers,  
 propellants, and sep. initiation)  
 IT Accelerometers  
 (microaccelerometers, gas generators for; multistage gas generator with  
 multiple chambers, propellants, and sep. initiation)  
 IT Gas generators  
 (multistage gas generator with multiple chambers, propellants, and sep.  
 initiation)  
 IT Nitramines  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (propellants; multistage gas generator with multiple chambers,  
 propellants, and sep. initiation)  
 IT Ammunition  
 (tailored propellants for; multistage gas generator with multiple  
 chambers, propellants, and sep. initiation)

11/245136

IT 9003-27-4, Polyisobutene 9003-39-8, Polyvinylpyrrolidone 24980-41-4,  
Polycaprolactone 25248-42-4, Polycaprolactone  
RL: NUU (Other use, unclassified); TEM (Technical or engineered material  
use); USES (Uses)  
(binder; multistage gas generator with multiple chambers, propellants,  
and sep. initiation)  
IT 96-05-9, Allyl methacrylate 97-90-5, Ethylene glycol  
dimethacrylate 2358-84-1, Diethylene glycol dimethacrylate  
RL: NUU (Other use, unclassified); TEM (Technical or engineered material  
use); USES (Uses)  
(combustion inhibitors; multistage gas generator with multiple  
chambers, propellants, and sep. initiation)  
IT 7757-79-1, Potassium nitrate, uses  
RL: NUU (Other use, unclassified); TEM (Technical or engineered material  
use); USES (Uses)  
(flash suppressant; multistage gas generator with multiple chambers,  
propellants, and sep. initiation)  
IT 6484-52-2, Ammonium nitrate, uses  
RL: NUU (Other use, unclassified); TEM (Technical or engineered material  
use); USES (Uses)  
(oxidizer; multistage gas generator with multiple chambers,  
propellants, and sep. initiation)  
IT 121-82-4, RDX 505-71-5, EDNA 2691-41-0, HMX 3058-38-6, TATB  
55510-04-8, Dinitroglycoluril 132683-64-8 135285-90-4, CL-20  
143178-24-9, Glycidyl azide polymer  
RL: TEM (Technical or engineered material use); USES (Uses)  
(propellants; multistage gas generator with multiple chambers,  
propellants, and sep. initiation)  
IT 85-98-3, Ethyl centralite 119-75-5, 2-Nitrodiphenyl amine  
122-39-4, Diphenyl amine, uses 603-54-3, Akardite I  
13114-72-2, Akardite II  
RL: NUU (Other use, unclassified); TEM (Technical or engineered material  
use); USES (Uses)  
(stabilizer; multistage gas generator with multiple chambers,  
propellants, and sep. initiation)  
IT 7782-42-5, Graphite, uses  
RL: NUU (Other use, unclassified); TEM (Technical or engineered material  
use); USES (Uses)  
(static dissipators; multistage gas generator with multiple chambers,  
propellants, and sep. initiation)

L6 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1996:761733 CAPLUS  
DN 126:39398  
ED Entered STN: 01 Jan 1997  
TI Modified poly(maleic anhydride-co-styrene) and related polymers  
as a base for color filters  
IN Pfeiffer, Michael J.  
PA Brewer Science, Inc., USA  
SO PCT Int. Appl., 62 pp.  
CODEN: PIXXD2  
DT Patent  
LA English  
IC ICM G03F009-00  
ICS C09K019-00; G03C005-00; G03C005-56  
CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related  
Properties)  
Section cross-reference(s): 38, 42, 74

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
------------	------	------	-----------------	------

for Connie

```

-----
PI WO 9633445 A1 19961024 WO 1996-US5192 19960415
W: AM, AU, BB, BG, BR, BY, CA, CN, CZ, EE, FI, GE, HU, JP, KG, KP,
KR, KZ, LK, LR, LT, LV, MD, MG, MN, MX, NO, NZ, PL, RO, RU, SG,
SI, SK, TJ, TT, UA, UZ, VN
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR,
IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML,
MR, NE, SN, TD, TG
AU 9656641 A 19961107 AU 1996-56641 19960415
EP 821813 A1 19980204 EP 1996-913794 19960415
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, FI
JP 11504128 T 19990406 JP 1996-531831 19960415
PRAI US 1995-431403 A 19950417
WO 1996-US5192 W 19960415

```

## CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 9633445	ICM	G03F009-00
	ICS	C09K019-00; G03C005-00; G03C005-56
	IPCI	G03F0009-00 [ICM,6]; C09K0019-00 [ICS,6]; G03C0005-00 [ICS,6]; G03C0005-56 [ICS,6]
	IPCR	G03F0007-004 [I,C*]; G03F0007-004 [I,A]; G02B0005-20 [I,C*]; G02B0005-20 [I,A]; G03F0007-00 [I,C*]; G03F0007-00 [I,A]; G03F0007-038 [I,C*]; G03F0007-038 [I,A]
AU 9656641	ECLA	G03F007/00B2; G03F007/038S
	IPCI	G03F0009-00 [ICM,6]; C09K0019-00 [ICS,6]; G03C0005-00 [ICS,6]; G03C0005-56 [ICS,6]
	IPCR	G03F0007-004 [I,C*]; G03F0007-004 [I,A]; G02B0005-20 [I,C*]; G02B0005-20 [I,A]; G03F0007-00 [I,C*]; G03F0007-00 [I,A]; G03F0007-038 [I,C*]; G03F0007-038 [I,A]
EP 821813	IPCI	G03F0009-00 [ICM,6]; C09K0019-00 [ICS,6]; G03C0005-00 [ICS,6]; G03C0005-56 [ICS,6]
	IPCR	G03F0007-004 [I,C*]; G03F0007-004 [I,A]; G02B0005-20 [I,C*]; G02B0005-20 [I,A]; G03F0007-00 [I,C*]; G03F0007-00 [I,A]; G03F0007-038 [I,C*]; G03F0007-038 [I,A]
JP 11504128	IPCI	G02B0005-20 [ICM,6]; G03F0007-004 [ICS,6]
	IPCR	G03F0007-00 [I,A]; G03F0007-00 [I,C*]; G03F0007-038 [I,A]; G03F0007-038 [I,C*]
AB		Methods of producing color filter elements by photolithog. patterning entail using a nonparticulate filter coating material to form a layer which is patterned and cured; the coating material comprises a vehicle and a heat stable soluble dye. The vehicle may include a modified poly (maleic anhydride-co-styrene) and related polymers. The polymers may be used as vehicles in a clear or partially clear form, as protective or blocking and anti-leach/stain coatings.
ST		color filter manuf polymer base; maleic anhydride styrene polymer filter base
IT		Coating materials Dyes Lithography Optical filters (modified polymers as a base for color filters)
IT		1330-38-7, Solvent Blue 38 12226-78-7, Solvent Blue 67 12227-67-7, Solvent Yellow 82 12237-27-3, Solvent Red 119 37229-23-5, Solvent Blue 45 61969-48-0, Solvent Red 127
		RL: DEV (Device component use); USES (Uses)

11/245136

(modified polymers as a base for color filters)

IT 107-11-9DP, 2-Propen-1-amine, reaction products with maleic anhydride-styrene copolymer 107-18-6DP, Allyl alcohol, reaction products with maleic anhydride-styrene copolymer 9011-13-6DP, Maleic anhydride-styrene polymer, reaction products with alcs. and amines 25265-97-8P 184530-45-8P 184530-46-9P  
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); USES (Uses)

(modified polymers as a base for color filters)

L6 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1987:626067 CAPLUS.  
DN 107:226067  
ED Entered STN: 12 Dec 1987  
TI Optical information recording material  
IN Sato, Tsutomu  
PA Ricoh Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 5 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM B41M005-26  
ICS G11B007-24  
CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

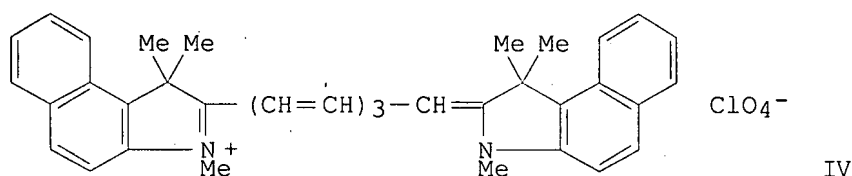
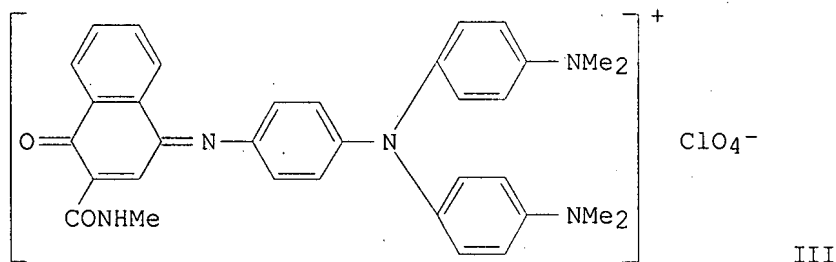
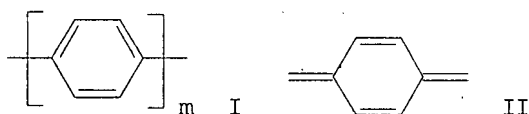
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 62046680	A	19870228	JP 1985-185921	19850826
	JP 08009260	B	19960131		
PRAI	JP 1985-185921		19850826		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 62046680	ICM	B41M005-26
	ICS	G11B007-24
	IPCI	B41M0005-26 [ICM,4]; G11B0007-24 [ICS,4]
	IPCR	G11B0007-24 [I,C*]; G11B0007-244 [I,A]
	ECLA	G11B007/244

GI





AB In the title material made of a support bearing thin recording layers containing an organic dye,  $\geq 1$  layer selected from a recording layer, an undercoat layer for the former, and a surface protective layer contains a compound of the formula  $(Z:NZ1NRR1)n^+ Xn^-$  [ $Z$  = a group forming a (substituted) cyclic ketone which may be condensed with an aromatic group;  $R$ ,  $R1$  = (substituted) alkyl, aryl;  $X$  = acid anion;  $n = 0, 1, 2$ ;  $Z1 = I$  or  $II$  (when  $m = 2$ ) which may be substituted by allyl, alkoxy, halo, OH]. The material, for use in semiconductor laser recording, has high preservation stability toward ambient heat and light. Thus, III and a cyanine dye IV were mixed together at a weight ratio of 100:15 and spin-coated on a poly(Me methacrylate) plate to form a recording layer with a thickness of ca. 500 Å. When the material was used for recording and reading with a 790-nm semiconductor laser beam at a recording frequency of 0.7 MHz and a scanning rate of 1.2 m/s the carrier-to-noise ratio was 55 dB, which did not lower much after exposure to light.

ST optical recording material lightfastness improvement; phenylenediamine deriv optical recording; amine phenylenedi deriv optical recording

IT Recording materials

(optical, containing phenylenediamine derivative, for improved lightfastness)

IT 23178-67-8 26752-32-9 111341-21-0 111341-25-4 111341-26-5  
111341-27-6 111341-29-8 111408-84-5

RL: TEM (Technical or engineered material use); USES (Uses)

(optical recording material containing, with improved lightfastness)

=> s polyallylamine

L7 1966 POLYALLYLAMINE

=> s 17 and protected

114788 PROTECTED

L8 19 L7 AND PROTECTED

for Connie

11/245136

=> d all 1-19

L8 ANSWER 1 OF 19 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2007:259942 CAPLUS  
DN 146:296424  
ED Entered STN: 09 Mar 2007  
TI Polymeric molecular receptors as phosphate sequestrants  
IN Huval, Chad C.; Holmes-Farley, Stephen Randall; Dhal, Pradeep K.  
PA Genzyme Corporation, USA  
SO PCT Int. Appl., 136pp.  
CODEN: PIXXD2  
DT Patent  
LA English  
IC ICM A61K  
CC 35-8 (Chemistry of Synthetic High Polymers)  
Section cross-reference(s): 63

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2007027566	A2	20070308	WO 2006-US33437	20060825
	W:				
	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
	RW:				
	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
PRAI	US 2005-713991P	P	20050902		
	US 2005-734462P	P	20051108		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
------------	-------	------------------------------------

WO 2007027566	ICM	A61K
	IPCI	A61K [ICM, 7]

AB Polymers and compns. utilizing such polymers are disclosed for treating hyperphosphatemia and other illnesses associated with elevated serum phosphate levels. Phosphate binding polymers, or a pharmaceutically acceptable salt of the polymers, comprise pendent groups extending from a backbone of the polymer. Each pendent group comprises at least two nitrogen-bearing functional groups which bind phosphate. A typical polymer was manufactured by reaction of 10.2 g polyepichlorohydrin 48 h at 180° with 200 mL tris(2-aminoethyl)amine in 250 mL NMP.

ST phosphate sequestrant amine side group polymer; polyepichlorohydrin trisaminoethylamine adduct manuf

IT Polyethers, preparation

Polyolefins

Polyoxyalkylenes, preparation

RL: IMF (Industrial manufacture); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(amine derivs.; polymeric mol. receptors having amine side chains as phosphate sequestrants)

IT Kidney, disease

(hyperphosphatemia; polymeric mol. receptors having amine side chains as phosphate sequestrants)

for Connie

- IT Sequestering agents  
(polymeric mol. receptors having amine side chains as phosphate sequestrants)
- IT Phosphates, processes  
RL: REM (Removal or disposal); PROC (Process)  
(polymeric mol. receptors having amine side chains as phosphate sequestrants)
- IT Quaternary ammonium compounds, preparation  
RL: IMF (Industrial manufacture); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(polymers; polymeric mol. receptors having amine side chains as phosphate sequestrants)
- IT 56-18-8DP, N-(3-Aminopropyl)-1,3-propanediamine, reaction products with polyepichlorohydrin 107-15-3DP, Ethylenediamine, reaction products with polyepichlorohydrin 111-40-0DP, Diethylenetriamine, reaction products with polyepichlorohydrin 4097-89-6DP, Tris(2-aminoethyl)amine, reaction products with polyepichlorohydrin 24969-06-0DP, Polyepichlorohydrin, reaction products with polyamines 29160-08-5DP, Poly[(2-chloroethyl) vinyl ether], reaction products with tris(aminoethyl)amine 32610-74-5P, 4-[[Bis(2-aminoethyl)amino]methyl]styrene homopolymer 61710-61-0DP, Polyepichlorohydrin, sru, reaction products with polyamines 928164-64-1P, N-[2-[Bis(2-aminoethyl)amino]ethyl]methacrylamide homopolymer 928164-68-5P, 4-[[Bis(3-aminopropyl)amino]methyl]styrene homopolymer 928164-72-1P, N-[3-(4-Vinylbenzylamino)propyl]-1,3-propanediamine homopolymer  
RL: IMF (Industrial manufacture); PEP (Physical, engineering or chemical process); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)  
(polymeric mol. receptors having amine side chains as phosphate sequestrants)
- IT 9003-05-8DP, Polyacrylamide, amine derivs. 25014-12-4DP, Polymethacrylamide, amine derivs. 25014-13-5P, Epichlorohydrin-ethylenediamine copolymer 25085-17-0P, Diethylenetriamine-epichlorohydrin copolymer 26336-38-9P, Polyvinylamine 30551-89-4P, Polyallylamine 37017-08-6DP, N-Acryloyloxysuccinimide homopolymer, reaction products with BOC-partially protected polyamine, deprotected 41077-50-3DP, 3,7,9-Triazabicyclo[3.3.1]nonane, polymer derivs. 51961-45-6P, N-(3-Aminopropyl)-1,3-propanediamine-epichlorohydrin copolymer 113506-17-5P, Epichlorohydrin-tris(2-aminoethyl)amine copolymer 928164-61-8P, (2-Chloroethyl) vinyl ether-epichlorohydrin-tris(2-aminoethyl)amine copolymer 928164-65-2P, N-[2-[Bis(2-aminoethyl)amino]ethyl]methacrylamide-epichlorohydrin copolymer 928164-66-3P, 4-[[Bis(2-aminoethyl)amino]methyl]styrene-epichlorohydrin copolymer 928164-69-6P, 4-[[Bis(3-aminopropyl)amino]methyl]styrene-epichlorohydrin copolymer 928164-74-3P, Epichlorohydrin-N-[3-(4-vinylbenzylamino)propyl]-1,3-propanediamine copolymer 928164-76-5P, 4-[[Bis(2-aminoethyl)amino]methyl]styrene-N,N'-ethylenebisacrylamide copolymer 928164-78-7P, 4-[[Bis(2-aminoethyl)amino]methyl]styrene-N,N'-bis(4-vinylbenzyl)ethylenediamine copolymer 928164-85-6DP, reaction products with N-Acryloyloxysuccinimide homopolymer, deprotected 928164-88-9P, N,N-Bis(2-aminoethyl)-N',N'-diallylethylenediamine homopolymer 928164-89-0DP, 2,4-Bis(aminomethyl)piperidine, polymer derivs. 928164-90-3DP, 2,5-Bis(aminomethyl)tetrahydropyrrole, polymer derivs.  
RL: IMF (Industrial manufacture); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(polymeric mol. receptors having amine side chains as phosphate sequestrants)
- IT 107-15-3, 1,2-Ethylenediamine, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)

(polymeric mol. receptors having amine side chains as phosphate sequestrants)

IT 7778-77-0, Potassium dihydrogen phosphate  
 RL: REM (Removal or disposal); PROC (Process)  
 (polymeric mol. receptors having amine side chains as phosphate sequestrants)

IT 29160-08-5P, Poly[(2-chloroethyl) vinyl ether] 46734-05-8P,  
 4-[[Bis(2-aminoethyl)amino]methyl]styrene 161038-11-5P,  
 4-(2-Aminoethyl)-1,7-bis(tert-butoxycarbonyl)-1,4,7-triazaheptane  
 884862-51-5P, N,N'-Bis(4-vinylbenzyl)ethylenediamine 928164-62-9P  
 928164-63-0P, N-[2-[Bis(2-aminoethyl)amino]ethyl]methacrylamide  
 928164-67-4P, 4-[[Bis(3-aminopropyl)amino]methyl]styrene 928164-70-9P,  
 N-[3-(4-Vinylbenzylamino)propyl]-1,3-propanediamine 928164-81-2P  
 928164-83-4P 928164-85-6P 928164-87-8P, N,N-Bis(2-aminoethyl)-N',N'-  
 diallylethylenediamine  
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (precursor; polymeric mol. receptors having amine side chains as  
 phosphate sequestrants)

IT 56-18-8; Bis(3-aminopropyl)amine 107-13-1, Acrylonitrile, reactions  
 920-46-7, Methacryloyl chloride 1592-20-7, 4-Vinylbenzyl chloride  
 4097-89-6, Tris(2-aminoethyl)amine 4963-47-7, Tris(3-aminopropyl)amine  
 24424-99-5, Di-tert-butyl dicarbonate 58632-95-4  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (precursor; polymeric mol. receptors having amine side chains as  
 phosphate sequestrants)

L8 ANSWER 2 OF 19 CAPLUS COPYRIGHT 2007 ACS on STN  
 AN 2007:15155 CAPLUS  
 DN 146:322995  
 ED Entered STN: 05 Jan 2007  
 TI DNA-polycation complexes Effect of polycation structure on  
 physico-chemical and biological properties  
 AU Slita, A. V.; Kasyanenko, N. A.; Nazarova, O. V.; Gavrilova, I. I.;  
 Eroпкина, E. M.; Sirotkin, A. K.; Smirnova, T. D.; Kiselev, O. I.;  
 Panarin, E. F.  
 CS Research Institute of Influenza, RAMS, St. Petersburg, 197376, Russia  
 SO Journal of Biotechnology (2007), 127(4), 679-693  
 CODEN: JBITD4; ISSN: 0168-1656  
 PB Elsevier B.V.  
 DT Journal  
 LA English  
 CC 63-5 (Pharmaceuticals)  
 Section cross-reference(s): 35

AB The purpose of the study was to investigate the influence of cationic  
 polymer structure on the formation of DNA-polycation complexes and their  
 transfection activity. Primary, tertiary, and quaternary polyamines with  
 mol. masses ranging from 8000 to 200,000 were investigated. DNA-cationic  
 polymer interaction was characterized by low gradient viscometry, dynamic  
 light scattering, CD, UV spectrometry, flow birefringence, DNA  
 electrophoresis, and electron microscopy. Transfection activity of the  
 complexes was evaluated by the expression of reporter gene  
 ( $\beta$ -galactosidase) and using synthetic FITC-labeled oligonucleotides.  
 Complex formation was found to be dependent on the structure and mol. weight  
 of the polymer and the ionic strength of the solution. Secondary DNA  
 structure in complexes was not disrupted, and DNA was protected  
 from protonation. Cell lines of different origin were used for testing of  
 transfection activity of the complexes. The sensitivity of the cells to  
 transfection was established to be highly dependent on the cell line.  
 DNA-polycation complexes are non-toxic according to MTT.

Polyallylamine, and polydimethylaminoethylmethacrylate were found to be the most promising polycations for gene delivery. Transfection efficacy of their complexes with DNA to T-98G cells reaches up to 90-100%. It was found that optimal mol. mass of polydimethylaminoethylmethacrylate is in the range of 8000-50,000 Da.

ST polycation DNA polyallylamine polydimethylaminoethylmethacrylate transfection gene vector

IT Genetic vectors

Molecular association

Particle size

Viscosity

(DNA-polycation complexes Effect of polycation structure on physico-chemical and biol. properties)

IT DNA

RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(DNA-polycation complexes Effect of polycation structure on physico-chemical and biol. properties)

IT 25104-18-1DP, Poly(L-lysine), complex with DNA 25154-86-3DP, Polydimethylaminoethylmethacrylate, complex with DNA 26161-33-1DP, complex with DNA 29792-49-2DP, Polyvinylamine hydrochloride, complex with DNA 38000-06-5DP, Poly(L-lysine), complex with DNA 71550-12-4DP, Polyallylamine hydrochloride, complex with DNA 124221-13-2DP, complex with DNA 124221-14-3P 124221-17-6P

RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(DNA-polycation complexes Effect of polycation structure on physico-chemical and biol. properties)

RE.CNT 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD  
RE

- (1) Akinc, A; J Gene Med 2005, V7, P657 CAPLUS
- (2) Bos, G; Vaccine 2004, V23, P460 CAPLUS
- (3) Dash, P; J Control Rel 1997, V48, P269 CAPLUS
- (4) De Smedt, S; Pharm Res 2000, V17, P113 CAPLUS
- (5) Dubruel, P; Biomacromolecules 2004, V5, P379 CAPLUS
- (6) Dubruel, P; Eur J Pharm Sci 2003, V18, P211 CAPLUS
- (7) Eldred, S; Bioconjug Chem 2005, V16, P694 CAPLUS
- (8) Frisman, E; Kolloidn Zh 1965, V27, P130 CAPLUS
- (9) Frisman, E; Mol Biol 1990, V24, P318 CAPLUS
- (10) Harada, S; Makromol Chem Rapid Commun 1984, V5, P27 CAPLUS
- (11) Howard, K; Biochim Biophys Acta 2004, V1674, P149 CAPLUS
- (12) Huey, R; Biopolymers 1981, V20, P2533 CAPLUS
- (13) Itaka, K; Biomaterials 2003, V24, P4495 CAPLUS
- (14) Kabanov, A; Bioconjug Chem 1995, V6, P7 CAPLUS
- (15) Kasyanenko, N; Biophys Chem 1998, V70, P93 CAPLUS
- (16) Kasyanenko, N; Colloids Surf A: Physicochem Eng Aspects 1999, V148, P121 CAPLUS
- (17) Kasyanenko, N; Langmuir 1999, V15, P7912 CAPLUS
- (18) Mosmann, T; J Immunol Methods 1983, V65, P55 MEDLINE
- (19) Panarin, E; Makromol Chem 1985, Suppl 9, P25
- (20) Panarin, E; Vysokomolek Soed 1977, V19B, P251
- (21) Pavlov, G; Prog Colloid Polym Sci 2006, V131, P134 CAPLUS
- (22) Pavlov, G; Vysokomolek Soed 2004, V46A, P1732
- (23) Reschel, T; J Control Rel 2002, V81, P201 CAPLUS
- (24) Sibileva, M; Mol Biol 1976, V10, P514 CAPLUS
- (25) Stickler, M; Angew Makromol Chem 1984, V123-124, P85
- (26) Suyber, S; Anal Biochem 1975, V64, P284

11/245136

- (27) Thomas, M; Appl Microbiol Biotechnol 2003, V62, P27 CAPLUS  
(28) van de Wetering, P; J Control Rel 1997, V49, P59 CAPLUS  
(29) van de Wetering, P; J Control Rel 1998, V53, P145 CAPLUS  
(30) Wolfert, M; Bioconjug Chem 1999, V10, P993 CAPLUS  
(31) Zhou, J; Biophys Chem 2004, V107, P273

L8 ANSWER 3 OF 19 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2006:187197 CAPLUS  
DN 144:260880  
ED Entered STN: 02 Mar 2006  
TI Orthopedic flexible body part fixing materials comprising support and curable resins with their surface partially cured  
IN Matsumoto, Yoshikazu; Kato, Yukihiro  
PA Alcare Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 18 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
CC 63-7 (Pharmaceuticals)  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2006055281	A	20060302	JP 2004-238593	20040818
PRAI	JP 2004-238593		20040818		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 2006055281	IPCI	A61F0013-04 [I,A]; A61F0005-01 [N,A]; A61F0005-02 [N,A]
	FTERM	4C098/AA01; 4C098/AA02; 4C098/BB05; 4C098/BB09; 4C098/BB11; 4C098/BC02; 4C098/BC46; 4C098/DD20; 4C098/DD30

AB The materials, e.g. splints, casts, etc., comprise a support such as glass fiber fabric and a curable resin, wherein the most part of the resin remains uncured and the resin at the surface is partially cured, e.g. upon covering the surface with a curing agent-containing water-permeable protective sheet when the resin is hydraulic or with a light-transmitting protective sheet containing curing agents capable of reacting with the resin. Surface of the material is protected because the resin is partially cured, thus preventing transfer of the resin during storage and being handled by a bare hand. Thus, a 7-ply laminate of a glass fiber fabric coated with a curable composition containing PEGs, bisphenol-type diols, a polyurethane prepolymer (MDI 47.5, modified MDI 11.5%), a catalyst, an antifoamer, etc., was covered with a PET fabric (porosity 60%) containing PVA and a polypropylene elastomer net. The lowermost glass fiber fabric layer was further laminated with a soft cellular polyurethane foam cushion layer, a water-resistant polypropylene melt-blown nonwoven fabric, and a skin-contact PET nonwoven fabric to give a splint material. The material was stored at 50° for 7 days under loading at 19.6 N/100 cm<sup>2</sup> to show no resin transfer to the surface net. The material was sprayed with H<sub>2</sub>O to finally show 3-point bending strength 685 N.

ST orthopedic flexible fixing material surface partially cured resin; splint material water curable polyurethane glass fiber fabric laminate

IT Polyurethanes, biological studies

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(acrylic; orthopedic flexible fixing materials such as splint materials comprising support and water- or light-curable resins with their surface partially cured upon covering with curing agent-containing protective sheet)

IT Carbohydrates, reactions  
Polyamines

for Connie

Polysaccharides, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(crosslinking agents; orthopedic flexible fixing materials such as splint materials comprising support and water- or light-curable resins with their surface partially cured upon covering with curing agent-containing protective sheet)

IT Polyolefin rubber

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(ethylene, net; protective sheet; orthopedic flexible fixing materials such as splint materials comprising support and water- or light-curable resins with their surface partially cured upon covering with curing agent-containing protective sheet)

IT Polyester fibers, biological studies

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(fabrics, nonwoven, covering material; orthopedic flexible fixing materials such as splint materials comprising support and water- or light-curable resins with their surface partially cured upon covering with curing agent-containing protective sheet)

IT Polyester fibers, biological studies

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(fabrics, protective sheet; orthopedic flexible fixing materials such as splint materials comprising support and water- or light-curable resins with their surface partially cured upon covering with curing agent-containing protective sheet)

IT Polyurethanes, biological studies

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(foams, cushion layer; orthopedic flexible fixing materials such as splint materials comprising support and water- or light-curable resins with their surface partially cured upon covering with curing agent-containing protective sheet)

IT Immobilization, animal

Medical goods

(orthopedic flexible fixing materials such as splint materials comprising support and water- or light-curable resins with their surface partially cured upon covering with curing agent-containing protective sheet)

IT Polyoxyalkylenes, biological studies

RL: IMF (Industrial manufacture); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(orthopedic flexible fixing materials such as splint materials comprising support and water- or light-curable resins with their surface partially cured upon covering with curing agent-containing protective sheet)

IT Polyamines

RL: RCT (Reactant); RACT (Reactant or reagent)

(polyalkylene-, crosslinking agents; orthopedic flexible fixing materials such as splint materials comprising support and water- or light-curable resins with their surface partially cured upon covering with curing agent-containing protective sheet)

IT Polyurethanes, biological studies

RL: IMF (Industrial manufacture); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(polyamine-polyoxyalkylene-; orthopedic flexible fixing materials such as splint materials comprising support and water- or light-curable resins with their surface partially cured upon covering with curing agent-containing protective sheet)

IT Polyoxyalkylenes, biological studies

RL: IMF (Industrial manufacture); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(polyamine-polyurethane-; orthopedic flexible fixing materials such as

- splint materials comprising support and water- or light-curable resins with their surface partially cured upon covering with curing agent-containing protective sheet)
- IT Polyurethanes, biological studies  
 RL: IMF (Industrial manufacture); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (polyoxyalkylene-; orthopedic flexible fixing materials such as splint materials comprising support and water- or light-curable resins with their surface partially cured upon covering with curing agent-containing protective sheet)
- IT Polyamines  
 RL: IMF (Industrial manufacture); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (polyoxyalkylene-polyurethane-; orthopedic flexible fixing materials such as splint materials comprising support and water- or light-curable resins with their surface partially cured upon covering with curing agent-containing protective sheet)
- IT Plastic foams  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (polyurethane, cushion layer; orthopedic flexible fixing materials such as splint materials comprising support and water- or light-curable resins with their surface partially cured upon covering with curing agent-containing protective sheet)
- IT Acrylic polymers, biological studies  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (polyurethane-; orthopedic flexible fixing materials such as splint materials comprising support and water- or light-curable resins with their surface partially cured upon covering with curing agent-containing protective sheet)
- IT Polyolefin rubber  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (propene, net, uppermost covering material; orthopedic flexible fixing materials such as splint materials comprising support and water- or light-curable resins with their surface partially cured upon covering with curing agent-containing protective sheet)
- IT Glass fiber fabrics  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (support; orthopedic flexible fixing materials such as splint materials comprising support and water- or light-curable resins with their surface partially cured upon covering with curing agent-containing protective sheet)
- IT 629-11-8DP, 1,6-Hexanediol, reaction products with polyethylene glycol, bisphenol-type diol, and MDI-based urethane prepolymer  
 RL: IMF (Industrial manufacture); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (crosslinking agent; orthopedic flexible fixing materials such as splint materials comprising support and water- or light-curable resins with their surface partially cured upon covering with curing agent-containing protective sheet)
- IT 107-15-3, Ethylenediamine, reactions 9002-89-5, Poly(vinyl alcohol) 9002-98-6 25104-18-1, Polylysine 26336-38-9, Poly(vinylamine) 30551-89-4, Polyallylamine 38000-06-5, Polylysine  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (crosslinking agent; orthopedic flexible fixing materials such as splint materials comprising support and water- or light-curable resins with their surface partially cured upon covering with curing agent-containing protective sheet)
- IT 56-81-5D, Glycerin, derivs. 9004-34-6D, Cellulose, derivs.  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (crosslinking agents; orthopedic flexible fixing materials such as



splint materials comprising support and water- or light-curable resins with their surface partially cured upon covering with curing agent-containing protective sheet)

- IT 101-68-8DP, MDI, adducts with bisphenol-type diol and modified MDI, reaction products with polyethylene glycol and crosslinking agents 111-40-0DP, Diethylenetriamine, polymers with acrylic urethane oligomers and hexanediol diacrylate 111-40-0DP, Diethylenetriamine, reaction products with polyethylene glycol, bisphenol-type diol, and MDI-based urethane prepolymer 9002-89-5DP, Poly(vinyl alcohol), reaction products with polyethylene glycol, bisphenol-type diol, and MDI-based urethane prepolymer 9002-98-6DP, reaction products with polyethylene glycol, bisphenol-type diol, and MDI-based urethane prepolymer 13048-33-4DP, 1,6-Hexanediol diacrylate, polymers with acrylic urethane oligomers and diethylenetriamine 25322-68-3DP, reaction products with bisphenol-type diol, MDI-based urethane prepolymer, and crosslinking agents 30551-89-4DP, Polyallylamine, polymers with acrylic urethane oligomers and hexanediol diacrylate

RL: IMF (Industrial manufacture); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(orthopedic flexible fixing materials such as splint materials comprising support and water- or light-curable resins with their surface partially cured upon covering with curing agent-containing protective sheet)

- IT 9002-88-4, Polyethylene

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(rubber, net, protective sheet; orthopedic flexible fixing materials such as splint materials comprising support and water- or light-curable resins with their surface partially cured upon covering with curing agent-containing protective sheet)

- IT 9003-07-0, Polypropylene

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(rubber, net, uppermost cover; orthopedic flexible fixing materials such as splint materials comprising support and water- or light-curable resins with their surface partially cured upon covering with curing agent-containing protective sheet)

L8 ANSWER 4 OF 19 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2005:1260368 CAPLUS

DN 144:171801

ED Entered STN: 02 Dec 2005

TI Chemical, thermal, and ultrasonic stability of hybrid nanoparticles and nanoparticle multilayer films

AU Isaacs, Steven R.; Choo, Hosun; Ko, Weon-Bae; Shon, Young-Seok

CS Department of Chemistry, Western Kentucky University, Bowling Green, KY, 42101, USA

SO Chemistry of Materials (2006), 18(1), 107-114

CODEN: CMATEX; ISSN: 0897-4756

PB American Chemical Society

DT Journal

LA English

CC 37-6 (Plastics Manufacture and Processing)

Section cross-reference(s): 38

- AB Gold nanoparticles stabilized by thiolate derived from normal and  $\omega$ -functionalized alkane- and arene-thiols ( $\text{HS}(\text{CH}_2)_n\text{CH}_3$ ,  $\text{HS}(\text{CH}_2)_{10}\text{COOH}$ ,  $\text{HS}(\text{CH}_2)_{11}\text{OH}$ ,  $\text{HSC}_6\text{H}_4\text{NH}_2$ ,  $\text{HSCH}_2\text{CH}_2\text{C}_6\text{H}_5$ , and  $\text{HSCH}_2\text{C}_6\text{H}_4\text{C}(\text{CH}_3)_3$ ) were synthesized. Differences in their chemical and ultrasonic stabilities were studied using UV-vis spectroscopy. The results showed that these stabilities of monolayer-protected nanoparticles were greatly influenced by the structure and functionality of the monolayer surrounding a nanoparticle core. The selective functionalization of the nanoparticle

allowed us to prepare hybrid nanostructure (nanoparticle multilayer assemblies) with different compns. and functionalities. This paper also presents an investigation of the chemical, thermal, and ultrasonic treatments of these nanoparticle multilayer assemblies. The results suggest that the linkers used to build nanoparticle multilayer films govern the overall stability of hybrid nanostructure.

- ST gold nanoparticle thiolate multilayer film thermal chem ultrasonic stability
- IT Polymer degradation  
(acoustic; ultrasonic stability of hybrid nanoparticles and multilayer films)
- IT Chemically resistant materials  
(chemical stability of hybrid nanoparticles and multilayer films)
- IT Glass substrates
- Hybrid organic-inorganic materials
- Laminated plastic films
- Monolayers
- Nanoparticles
- Self-assembled monolayers  
(chemical, thermal, and ultrasonic stability of hybrid nanoparticles and multilayer films)
- IT Cluster compounds  
RL: PRP (Properties)  
(chemical, thermal, and ultrasonic stability of hybrid nanoparticles and multilayer films)
- IT Decomposition kinetics  
(constant; chemical, thermal, and ultrasonic stability of hybrid nanoparticles and multilayer films)
- IT Films  
(multilayer; chemical, thermal, and ultrasonic stability of hybrid nanoparticles and multilayer films)
- IT Polyamines  
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)  
(polyamide-, dendrimers; chemical, thermal, and ultrasonic stability of hybrid nanoparticles and multilayer films)
- IT Dendritic polymers  
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)  
(polyamide-polyamines; chemical, thermal, and ultrasonic stability of hybrid nanoparticles and multilayer films)
- IT Polyamides, properties  
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)  
(polyamine-, dendrimers; chemical, thermal, and ultrasonic stability of hybrid nanoparticles and multilayer films)
- IT Polymer degradation  
(thermal; chemical, thermal, and ultrasonic stability of hybrid nanoparticles and multilayer films)
- IT 25704-18-1, Polysodium 4-styrenesulfonate 71550-12-4,  
Polyallylamine hydrochloride  
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)  
(chemical stability of hybrid nanoparticles and multilayer films)
- IT 917-61-3 1310-58-3, Potassium hydroxide, reactions 7647-01-0,  
Hydrochloric acid, reactions  
RL: RGT (Reagent); RACT (Reactant or reagent)  
(chemical stability of hybrid nanoparticles and multilayer films)
- IT 13770-18-8, Copper perchlorate  
RL: CAT (Catalyst use); USES (Uses)  
(chemical, thermal, and ultrasonic stability of hybrid nanoparticles and multilayer films)
- IT 1193-02-8D, reaction products with 1-hexane-thiol coated gold clusters  
71310-21-9D, reaction products with 1-hexane-thiol coated gold clusters

73768-94-2D, 11-Mercaptoundecanol, reaction products with 1-hexane-thiol coated gold clusters

RL: PRP (Properties)

(chemical, thermal, and ultrasonic stability of hybrid nanoparticles and multilayer films)

IT 16903-35-8, Hydrogen tetrachloroaurate 16940-66-2, Sodium tetrahydroborate

RL: RCT (Reactant); RACT (Reactant or reagent)

(chemical, thermal, and ultrasonic stability of hybrid nanoparticles and multilayer films)

IT 93376-66-0, PAMAM G-2

RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)

(dendritic; chemical stability of hybrid nanoparticles and multilayer films)

IT 110-66-7, 1-Pentanethiol 111-31-9, 1-Hexanethiol 111-88-6, 1-Octanethiol 112-55-0, 1-Dodecanethiol 1455-21-6, 1-Nonanethiol 4410-99-5, Benzeneethanethiol 25276-70-4, 1-Pentadecanethiol 49543-63-7, 4-tert.-Butyl benzyl-mercaptan

RL: PRP (Properties)

(gold cluster compound; chemical, thermal, and ultrasonic stability of hybrid nanoparticles and multilayer films)

IT 7440-57-5, Gold, properties

RL: PRP (Properties)

(nanoparticle, clusters; chemical, thermal, and ultrasonic stability of hybrid nanoparticles and multilayer films)

RE.CNT 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Boal, A; J Am Chem Soc 2000, V122, P734 CAPLUS
- (2) Brust, M; Chem Commun 1994, P801 CAPLUS
- (3) Brust, M; Chem Commun 1995, P1655 CAPLUS
- (4) Buttner, M; J Phys Chem B 2005, V109, P5464
- (5) Chan, E; J Am Chem Soc 2002, V124, P12238 CAPLUS
- (6) Chen, S; Langmuir 1999, V15, P682 CAPLUS
- (7) Chen, S; Langmuir 1999, V15, P7551 CAPLUS
- (8) Choo, H; Langmuir 2003, V19, P8555 CAPLUS
- (9) Daniel, M; Chem Rev 2004, V104, P293 CAPLUS
- (10) Donkers, R; Langmuir 2004, V20, P1945 CAPLUS
- (11) Fullam, S; J Phys Chem B 2000, V104, P6164 CAPLUS
- (12) Guo, R; J Am Chem Soc 2005, V127, P2752 CAPLUS
- (13) Hao, E; Chem Mater 2000, V12, P3392 CAPLUS
- (14) Hicks, J; Langmuir 2002, V18, P2288 CAPLUS
- (15) Hostetler, M; Langmuir 1998, V14, P17 CAPLUS
- (16) Joseph, Y; J Phys Chem B 2003, V107, P7406 CAPLUS
- (17) Kim, Y; Nano Lett 2001, V1, P165 CAPLUS
- (18) Krasteva, N; Langmuir 2003, V19, P7754 CAPLUS
- (19) Krasteva, N; Nano Lett 2002, V2, P551 CAPLUS
- (20) Luo, J; J Phys Chem B 2004, V108, P9669 CAPLUS
- (21) Luo, J; Langmuir 2004, V20, P4254 CAPLUS
- (22) Maye, M; Langmuir 2000, V16, P7520 CAPLUS
- (23) Paulini, R; Langmuir 2002, V18, P2368 CAPLUS
- (24) Prevo, B; Chem Mater 2005, V17, P28 CAPLUS
- (25) Radu, G; J Phys Chem B 2002, V106, P10301 CAPLUS
- (26) Sheibley, D; J Mater Chem 2005, V15, P491 CAPLUS
- (27) Shon, Y; Dekker Encyclopedia of Nanoscience and Nanotechnology 2004, E-ENN-120034034
- (28) Shon, Y; Dendrimers and Nanosciences 2003, V6, P1009 CAPLUS
- (29) Shon, Y; J Phys Chem B 2000, V104, P8192 CAPLUS
- (30) Templeton, A; Acc Chem Res 2000, V33, P27 CAPLUS
- (31) Templeton, A; J Am Chem Soc 1998, V120, P1906 CAPLUS
- (32) Terrill, R; J Am Chem Soc 1995, V117, P12537 CAPLUS

11/245136

- (33) Wuelfing, W; Chem Mater 2001, V13, P87 CAPLUS  
(34) Xie, W; Chem Mater 2002, V14, P4837 CAPLUS  
(35) Yu, A; Nano Lett 2003, V3, P1203 CAPLUS  
(36) Zamborini, F; J Am Chem Soc 2002, V124, P8958 CAPLUS

L8 ANSWER 5 OF 19 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2005:1090325 CAPLUS

DN 144:23396

ED Entered STN: 12 Oct 2005

TI pH-Induced Reversible Conformational and Morphological Regulation of  
Polyleucine Grafted Polyallylamine Assembly in Solution

AU Higuchi, Masahiro; Inoue, Takateru; Miyoshi, Hidenori; Kawaguchi, Masami

CS Department of Chemistry for Materials, Faculty of Engineering, Mie  
University, Tsu, Mie, 514-8507, Japan

SO Langmuir (2005), 21(24), 11462-11467

CODEN: LANGD5; ISSN: 0743-7463

PB American Chemical Society

DT Journal

LA English

CC 36-7 (Physical Properties of Synthetic High Polymers)

AB One of the essential parts in the mol. mechanism of biol. properties is  
the structural changes of proteins induced by stimuli. An amphiphilic  
copolymer, poly(L-leucine) grafted polyallylamine as a simple  
model of proteins, has been prepared by NCA (N-carboxyanhydride) polymerization  
with free amino groups of polyallylamine as an initiator. Here,  
we report the pH-induced reversible conformational and morphol. regulation  
of the amphiphilic copolymer, whose hydrophobic peptide graft chains have  
no pH-sensitive groups, in an aqueous solution containing 50 vol%  
trifluoroethanol.

The conformation of the poly(L-leucine) graft chain was found to be  
strongly pH dependent. Under acidic conditions, where electrostatic  
repulsion existed between the neighboring protonated amine moieties of the  
polyallylamine main chain, the rapid aggregation of the  
poly(L-leucine) graft chains was disturbed, and the peptide graft chains  
formed a  $\beta$ -sheet structure owing to the intramol. hydrogen bonding  
among the graft chains. Under this condition, the amphiphilic polymer  
formed amyloid-like fibrils, and then the fibrils grew into a planer plate  
composed of stacked  $\beta$ -sheets. On the other hand, under basic  
conditions, the poly(L-leucine) graft chains showed conformational  
transitions from a  $\beta$ -sheet structure to an  $\alpha$ -helical  
conformation owing to a distortion of the regular arrangement of the  
peptide graft chains by the conformational change of the  
polyallylamine main chain, whose amino groups were deprotonated.  
The conformational transition resulted in a disturbance of the regular  
sheet assembly of the amphiphilic copolymer and induced morphol. changes  
to the amorphous globular aggregates. The pH-induced conformational and  
morphol. changes of the poly(L-leucine) graft polyallylamine  
were reversible and synchronized with the protonation of the  
polyallylamine main chain.

ST polyleucine polyallylamine graft copolymer morphol chain  
conformation hydrogen bonding

IT Polymer chains

(conformation; preparation and pH-induced reversible conformational and  
morphol. regulation of polyleucine grafted polyallylamine  
assembly in solution)

IT Polyamides, properties

RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP  
(Physical process); SPN (Synthetic preparation); PREP (Preparation); PROC  
(Process)

(graft polymers; preparation and pH-induced reversible conformational and

for Connie

11/245136

morphol. regulation of polyleucine grafted polyallylamine  
assembly in solution)

IT Hydrogen bond  
(intramol.; preparation and pH-induced reversible conformational and  
morphol. regulation of polyleucine grafted polyallylamine  
assembly in solution)

IT Aggregates  
Circular dichroism  
Conformational transition  
Polymer morphology  
(preparation and pH-induced reversible conformational and morphol.  
regulation of polyleucine grafted polyallylamine assembly in  
solution)

IT 3190-70-3DP, L-Leucine N-carboxyanhydride, graft polymers with  
butylcarbonyl-protected polyallylamine 24424-99-5DP,  
Di-tert-butyl dicarbonate, reaction products with polyallylamine  
, graft polymers with L-leucine N-carboxyanhydride, deprotected  
30551-89-4DP, Polyallylamine, reaction products with di-Bu  
dicarbonate, graft polymers with L-leucine N-carboxyanhydride, deprotected  
870636-97-8P

RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP  
(Physical process); SPN (Synthetic preparation); PREP (Preparation); PROC  
(Process)

(preparation and pH-induced reversible conformational and morphol.  
regulation of polyleucine grafted polyallylamine assembly in  
solution)

RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD  
RE

- (1) Blow, D; Protein Sci 1994, V3, P1638 CAPLUS
- (2) Daly, W; Tetrahedron Lett 1988, V29, P5859 CAPLUS
- (3) Fukushima, Y; Chem Lett 1999, P157 CAPLUS
- (4) Glenner, G; Biochem Biophys Res Commun 1984, V122, P1131 CAPLUS
- (5) Greenfield, N; Biochemistry 1969, V8, P4108 CAPLUS
- (6) Harper, J; Annu Rev Biochem 1997, V66, P385 CAPLUS
- (7) Higuchi, M; Langmuir 2000, V16, P7061 CAPLUS
- (8) Hong, D; J Am Chem Soc 1999, V121, P8427 CAPLUS
- (9) Janek, K; Biochemistry 1999, V38, P8246 CAPLUS
- (10) Jarret, J; Biochemistry 1992, V31, P12345
- (11) Kauffmann, E; Proc Natl Acad Sci U S A 2001, V98, P6646 CAPLUS
- (12) Kirschner, D; Proc Natl Acad Sci U S A 1985, V83, P503
- (13) Koga, T; Chem Commun 2002, P243
- (14) Koga, T; Chem-Eur J 2003, V9, P1146 CAPLUS
- (15) Koga, T; FEBS Lett 2002, V531, P137 CAPLUS
- (16) Lansbury, P; Acc Chem Res 1996, V29, P317 CAPLUS
- (17) Lashuel, H; J Am Chem Soc 2000, V122, P5262 CAPLUS
- (18) Lomakin, A; Proc Natl Acad Sci U S A 1996, V93, P1125 CAPLUS
- (19) Maeda, H; Biopolymer 1984, V23, P1333 CAPLUS
- (20) Miyazawa, T; J Am Chem Soc 1961, V83, P712 CAPLUS
- (21) Ramirez-Aguilar, K; Langmuir 1998, V14, P2562 CAPLUS
- (22) Sipe, J; Crit Rev Clin Lab Sci 1994, V31, P325 CAPLUS
- (23) Sugimoto, N; Chem Lett 1999, P637 CAPLUS
- (24) Takahashi, Y; Chem-Eur J 1998, V4, P2475 CAPLUS
- (25) Walsh, D; J Biol Chem 1997, V272, P22364 CAPLUS
- (26) Yamada, N; J Am Chem Soc 1998, V120, P12192 CAPLUS
- (27) Zhang, S; Proc Natl Acad Sci U S A 1997, V94, P23 CAPLUS

L8 ANSWER 6 OF 19 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2005:547065 CAPLUS

DN 143:73874

ED Entered STN: 24 Jun 2005

for Connie

11/245136

TI Catalytic enzyme-modified textiles for active protection from toxins  
IN Singh, Alok; Dressick, Walter J.; Lee, Yongwoo  
PA USA  
SO U.S. Pat. Appl. Publ., 18 pp., Sont.-in-part of U.S. Ser. No. 750,637.  
CODEN: USXXCO  
DT Patent  
LA English  
IC ICM C12N009-16  
INCL 435196000  
CC 7-7 (Enzymes)  
Section cross-reference(s): 40  
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2005136523	A1	20050623	US 2004-849621	20040520
	US 2005136522	A1	20050623	US 2003-750637	20031223
	US 7067294	B2	20060627		
	US 2007014838	A1	20070118	US 2006-527650	20060919
PRAI	US 2003-750637	A2	20031223		
	US 2004-849621	A3	20040520		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2005136523	ICM	C12N009-16
	INCL	435196000
	IPCI	C12N0009-16 [ICM,7]
	IPCR	A61K0038-43 [I,C*]; A61K0038-46 [I,A]; C12N0009-16 [I,C*]; C12N0009-16 [I,A]
	NCL	435/196.000
	ECLA	A62D005/00; A61K038/46
US 2005136522	IPCI	C12N0011-00 [I,A]
	IPCR	A61K0038-43 [I,C*]; A61K0038-46 [I,A]; C12N0009-16 [I,C*]; C12N0009-16 [I,A]
	NCL	435/196.000; 424/094.600
	ECLA	A62D005/00; A61K038/46
US 2007014838	IPCI	A61K0009-70 [I,A]; B32B0027-04 [I,A]; C12N0011-04 [I,A]; C12N0011-00 [I,C*]; C12N0009-16 [I,A]
	IPCR	A61K0009-70 [I,C]; A61K0009-70 [I,A]; B32B0027-04 [I,C]; B32B0027-04 [I,A]; C12N0009-16 [I,C]; C12N0009-16 [I,A]; C12N0011-00 [I,C]; C12N0011-04 [I,A]
	NCL	424/443.000; 435/182.000; 435/196.000; 442/123.000

AB The present invention provides bioactive catalytic enzyme-modified textiles for providing protection from chemical exposure that are stable and retain their catalytic activity comprise a cloth substrate, at least one polyelectrolyte layer, at least one enzyme layer to degrade the chemical agent, and an end-capping layer. The textiles of the present invention can be used for reusable clothing that decontaminates itself after exposure to toxins and can be worn multiple times or for disposable clothing and wipes intended for a single use that decontaminate themselves without harming the environment. In a preferred embodiment, the present invention takes advantage of superior catalytic activity of enzymes by immobilizing them within polyelectrolyte multilayers (PEMs). The technique for forming multilayers is simple and effective as polyelectrolytes of opposing polarity are alternatively deposited through neutralization and overcompensation of their charges. A capping agent provides stability to the multilayers, keeps enzymes protected in adverse working environments, and attracts the toxic agents to facilitate contact with the catalytic sites. The present invention provides several advantages over the prior art. It leads to enhanced enzyme shelf life under normal storage conditions. It allows

for Connie

incorporation of multiple components into multilayers to provide add-on capabilities to the packaged system. It is lightwt., robust, sturdy, disposable, self-decontaminating, and cost-effective. It offers versatility as it can be designed for use on various materials. One example demonstrates the preparation of a polyelectrolyte-enzyme multilayer containing a single layer of the OPH enzyme on a woven fiberglass cloth sample by the dip coating method.

ST catalysis enzyme modified textile toxin decontamination protective clothing

IT Chemicals  
Decontamination  
Textiles  
(catalytic enzyme-modified textiles for active protection from toxins)

IT Enzymes, uses  
RL: CAT (Catalyst use); TEM (Technical or engineered material use); USES (Uses)  
(catalytic enzyme-modified textiles for active protection from toxins)

IT Fluoropolymers, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(catalytic enzyme-modified textiles for active protection from toxins)

IT Toxins  
RL: REM (Removal or disposal); PROC (Process)  
(catalytic enzyme-modified textiles for active protection from toxins)

IT Glass fiber fabrics  
RL: TEM (Technical or engineered material use); USES (Uses)  
(catalytic enzyme-modified textiles for active protection from toxins)

IT Glass fibers, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(catalytic enzyme-modified textiles for active protection from toxins)

IT Polyamide fibers, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(catalytic enzyme-modified textiles for active protection from toxins)

IT Rayon, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(catalytic enzyme-modified textiles for active protection from toxins)

IT Polymers, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(charged, substrate capable of adsorbing; catalytic enzyme-modified textiles for active protection from toxins)

IT Safety devices  
(chemical protective clothing; catalytic enzyme-modified textiles for active protection from toxins)

IT Clothing  
(chemical protective; catalytic enzyme-modified textiles for active protection from toxins)

IT Amines, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(cotton modified with; catalytic enzyme-modified textiles for active protection from toxins)

IT Textiles  
Textiles  
(cotton; catalytic enzyme-modified textiles for active protection from toxins)

IT Coating process  
(dip, layers are deposited using; catalytic enzyme-modified textiles for active protection from toxins)

IT Functional groups  
(hexyl, outmost capping layer comprises branched polyethylenimine (BPEI) modified with; catalytic enzyme-modified textiles for active protection from toxins)

11/245136

- IT Polyelectrolytes  
(layer; catalytic enzyme-modified textiles for active protection from toxins)
- IT Antibacterial agents  
(outermost capping layer contains; catalytic enzyme-modified textiles for active protection from toxins)
- IT Acrylic polymers, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(polyelectrolyte layer comprises; catalytic enzyme-modified textiles for active protection from toxins)
- IT Coating process  
(spin, layers are deposited using; catalytic enzyme-modified textiles for active protection from toxins)
- IT Coating process  
(spray, layers are deposited using; catalytic enzyme-modified textiles for active protection from toxins)
- IT Functional groups  
(substrate comprises a material whose surface chemical modified to generate; catalytic enzyme-modified textiles for active protection from toxins)
- IT Threads  
(woven into a fabric, substrate is; catalytic enzyme-modified textiles for active protection from toxins)
- IT 923-26-2, 1,2-Dihydroxypropyl methacrylate 1760-24-3,  
N-[(3-Trimethoxysilyl)propyl]ethylenediamine 149305-62-4,  
1,2-Dihydroxypropyl 4-vinylbenzyl ether  
RL: NUU (Other use, unclassified); USES (Uses)  
(branched, capping layer comprises; catalytic enzyme-modified textiles for active protection from toxins)
- IT 12619-70-4, Cyclodextrin  
RL: NUU (Other use, unclassified); USES (Uses)  
(cotton modified with; catalytic enzyme-modified textiles for active protection from toxins)
- IT 7585-39-9,  $\beta$ -Cyclodextrin  
RL: NUU (Other use, unclassified); USES (Uses)  
(functionalized polyelectrolyte, polyelectrolyte layer comprises; catalytic enzyme-modified textiles for active protection from toxins)
- IT 9032-18-2, Organophosphorous acid anhydrolase  
RL: CAT (Catalyst use); TEM (Technical or engineered material use); USES (Uses)  
(organophosphorous acid anhydrolase; catalytic enzyme-modified textiles for active protection from toxins)
- IT 117698-12-1, EC 3.1.8.1  
RL: CAT (Catalyst use); TEM (Technical or engineered material use); USES (Uses)  
(organophosphorous hydrolase; catalytic enzyme-modified textiles for active protection from toxins)
- IT 74-83-9, Methyl bromide, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(outmost capping layer comprises branched polyethylenimine quaternized with; catalytic enzyme-modified textiles for active protection from toxins)
- IT 9002-84-0, Polytetrafluoroethylene  
RL: NUU (Other use, unclassified); USES (Uses)  
(oxidized, substrate comprises; catalytic enzyme-modified textiles for active protection from toxins)
- IT 9047-01-2, Phosphotriesterase  
RL: CAT (Catalyst use); TEM (Technical or engineered material use); USES (Uses)  
(phosphotriesterases (PTE) (EC 3.1.8); catalytic enzyme-modified

for Connie



11/245136

textiles for active protection from toxins)  
IT 50851-57-5  
RL: NUU (Other use, unclassified); USES (Uses)  
(polyelectrolyte layer comprises, capping layer comprises; catalytic enzyme-modified textiles for active protection from toxins)  
IT 9002-98-6 9003-47-8, Polyvinylpyridine 25087-26-7, Polymethacrylic acid 25191-25-7, Polyvinyl sulfate 26062-79-3, Polydiallyl dimethylammonium chloride 26913-06-4, Poly[imino(1,2-ethanediyl)] 71550-12-4, Polyallylamine hydrochloride  
RL: NUU (Other use, unclassified); USES (Uses)  
(polyelectrolyte layer comprises; catalytic enzyme-modified textiles for active protection from toxins)  
  
L8 ANSWER 7 OF 19 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2004:456842 CAPLUS  
DN 141:217198  
ED Entered STN: 07 Jun 2004  
TI X-ray magnetic circular dichroism study of gold nanoparticles protected by polymer  
AU Yamamoto, Y.; Miura, T.; Teranishi, T.; Suzuki, M.; Kawamura, N.; Miyagawa, H.; Nakamura, T.; Kobayashi, K.; Hori, H.  
CS School of Materials Science, Japan Advanced Institute of Science and Technology (JAIST), Tatsunokuchi, Ishikawa, 923-1292, Japan  
SO Journal of Magnetism and Magnetic Materials (2004), 272-276(Suppl. 1), E1183-E1184  
CODEN: JMMMD; ISSN: 0304-8853  
URL: <http://www.sciencedirect.com/science/journal/03048853>  
PB Elsevier Science B.V.  
DT Journal; (online computer file)  
LA English  
CC 77-1 (Magnetic Phenomena)  
Section cross-reference(s): 36, 56, 66, 73  
AB Bulk Au metal is chemical stable and has diamagnetic properties. However, these properties might be different in nano-sized region. This article reports that the direct observation of spontaneous spin polarization of Au nanoparticles employing x-ray MCD (XMCD). Magnetization estimated by XMCD shows a good agreement with the results obtained by d.c. magnetization. This result evidences the intrinsic spin polarization in nano-sized material.  
ST gold nanoparticle XMCD XAS magnetization polymer host  
IT Nanoparticles  
Spin polarization  
X-ray magnetic circular dichroism  
(XMCD study of gold nanoparticles protected by polymer)  
IT Magnetization  
X-ray spectra  
(of gold nanoparticles protected by polymer)  
IT 71550-12-4, Polyallylamine hydrochloride  
RL: NUU (Other use, unclassified); USES (Uses)  
(XMCD study of gold nanoparticles protected by polymer)  
IT 7440-57-5, Gold, properties  
RL: PRP (Properties)  
(XMCD study of gold nanoparticles protected by polymer)  
RE.CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD  
RE  
(1) Hori, H; Phys Lett A 1999, V263, P406 CAPLUS  
(2) Schmid, G; Clusters and Colloids 1994  
(3) Teranishi, T; Adv Mater 1998, V10, P596 CAPLUS  
(4) van Leeuwen, D; Phys Rev Lett 1994, V73, P1432 CAPLUS  
(5) Volokitin, Y; Nature 1996, V384, P621 CAPLUS

for Connie

L8 ANSWER 8 OF 19 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2004:236338 CAPLUS  
DN 140:387786  
ED Entered STN: 23 Mar 2004  
TI A simple protocol for the modular assembly of "millipede" artificial enzymes  
AU Motherwell, William B.; Atkinson, Catherine E.; Aliev, Abil E.; Wong, Stephanie Y. F.; Warrington, Brian H.  
CS Department of Chemistry, University College London, London, WC1H 0AJ, UK  
SO Angewandte Chemie, International Edition (2004), 43(10), 1225-1228  
CODEN: ACIEF5; ISSN: 1433-7851  
PB Wiley-VCH Verlag GmbH & Co. KGaA  
DT Journal  
LA English  
CC 7-8 (Enzymes)  
Section cross-reference(s): 35  
OS CASREACT 140:387786  
AB A modular "step-by-step" strategy, which combines both design and selection elements for the attachment of sep. considered receptor sites and catalytically active groups to a flexible polymer backbone, can be used to construct an artificial enzyme. The method outlined is clearly amenable to a parallel synthesis approach for optimization and can also provide, at every step along the way, detailed information about the relative importance and cooperativity of the groups contributing to the mol. environment of active sites within enzymes.  
ST artificial enzyme modular assembly transition state functional group polymer; esterase artificial modular assembly transition state functional group polymer  
IT Molecular association  
(esterase transition state analog interaction with dipeptides in relation to assembly of artificial enzymes)  
IT Enzymes, biological studies  
RL: BSU (Biological study, unclassified); CAT (Catalyst use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(synthetic; modular step-by-step protocol for assembly of artificial enzymes based on transition state analog-related receptor sites and catalytically active residues on flexible polymer)  
IT 305-84-0 658-79-7 687-69-4 7093-70-1 16709-12-9 17136-25-3  
22467-93-2 67726-09-4  
RL: BSU (Biological study, unclassified); PEP (Physical, engineering or chemical process); PYP (Physical process); BIOL (Biological study); PROC (Process)  
(esterase transition state analog interaction with dipeptides in relation to assembly of artificial enzymes)  
IT 71550-12-4DP, reaction products with protected lysine and arginylarginine 78081-87-5DP, reaction products with polyallylamine and protected arginylarginine 688044-44-2DP, reaction products with polyallylamine and protected lysine  
RL: BSU (Biological study, unclassified); CAT (Catalyst use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(modular step-by-step protocol for assembly of artificial esterases based on transition state analog-related receptor sites and catalytically active residues on flexible polymer)  
IT 71550-12-4, Polyallylamine hydrochloride 688044-44-2  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(modular step-by-step protocol for assembly of artificial esterases

based on transition state analog-related receptor sites and catalytically active residues on flexible polymer)

IT 588708-82-1

RL: BSU (Biological study, unclassified); RCT (Reactant); BIOL (Biological study); RACT (Reactant or reagent)

(substrate ester; modular step-by-step protocol for assembly of artificial esterases based on transition state analog-related receptor sites and catalytically active residues on flexible polymer)

IT 588708-83-2

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(transition state analog; modular step-by-step protocol for assembly of artificial esterases based on transition state analog-related receptor sites and catalytically active residues on flexible polymer)

RE.CNT 32 THERE ARE 32 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Atkinson, C; Chem Eur J 2003, V9, P1714 CAPLUS
- (2) Brady, P; Chem Soc Rev 1997, V26, P327 CAPLUS
- (3) Breslow, R; Chem Rev 1998, V98, P1997 CAPLUS
- (4) Carcanague, D; Angew Chem 1990, V102, P836 CAPLUS
- (5) Carcanague, D; Angew Chem Int Ed Engl 1990, V29, P769
- (6) DeRose, V; Chem Biol 2002, V9, P961 CAPLUS
- (7) Ferscht, A; Structure and mechanism in protein science. A guide to enzyme catalysis and protein folding 1999
- (8) Fielding, L; Tetrahedron 2000, V56, P6151 CAPLUS
- (9) Frauendorf, C; Angew Chem 1998, V110, P1449
- (10) Frauendorf, C; Angew Chem Int Ed 1998, V37, P1378 CAPLUS
- (11) Gafni, A; J Org Chem 1997, V62, P120 CAPLUS
- (12) Jaeger, K; Appl Microbiol Biotechnol 2001, V55, P519 CAPLUS
- (13) Klotz, I; Enzyme Mechanisms 1987, P14
- (14) Lin, M; Anal Chim Acta 1995, V307, P449 CAPLUS
- (15) Menger, F; Chem Commun 1997, P633 CAPLUS
- (16) Menger, F; J Org Chem 1995, V60, P6666 CAPLUS
- (17) Menger, F; J Org Chem 1998, V63, P7578 CAPLUS
- (18) Motherwell, W; Tetrahedron 2001, V57, P4663 CAPLUS
- (19) Peterson, B; Tetrahedron 1995, V51, P401 CAPLUS
- (20) Pollack, S; Science 1986, V234, P1570 CAPLUS
- (21) Raymond, J; Top Curr Chem 1999, V200, P59
- (22) Reetz, M; Appl Microbiol Biotechnol 2001, V55, P531 CAPLUS
- (23) Stevenson, J; Nat Prod Rep 2000, V17, P535 CAPLUS
- (24) Suh, J; Synlett 2001, V9, P1343
- (25) Suresh, C; Acta Crystallogr Sect B 1986, V42, P473
- (26) Tanaka, F; Chem Rev 2002, V102, P4885 CAPLUS
- (27) Tanaka, N; J Chromatogr A 1997, V781, P139 CAPLUS
- (28) Tao, H; Curr Opin Chem Biol 2002, V6, P858 CAPLUS
- (29) Tramontano, A; Science 1986, V234, P1566 CAPLUS
- (30) Twyman, L; Chem Soc Rev 2002, V31, P69 CAPLUS
- (31) Wu, D; J Magn Reson Ser A 1995, V115, P260 CAPLUS
- (32) Wulff, G; Chem Rev 2002, V102, P1 CAPLUS

L8 ANSWER 9 OF 19 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2003:747019 CAPLUS

DN 139:263806

ED Entered STN: 24 Sep 2003

TI Formation of Silver Nanoparticles under Structured Amino Groups in Pseudo-dendritic Poly(allylamine) Derivatives

AU Kuo, Ping-Lin; Chen, Wei-Fu

CS Department of Chemical Engineering, National Cheng Kung University, Tainan, 70101, Taiwan

SO Journal of Physical Chemistry B (2003), 107(41), 11267-11272

for Connie

CODEN: JPCBFK; ISSN: 1520-6106

PB American Chemical Society

DT Journal

LA English

CC 56-1 (Nonferrous Metals and Alloys)

Section cross-reference(s): 38

AB The syntheses of silver nanoparticles stabilized by poly(allylamine) (PAA) and by polyethyleneiminated poly(allylamine) (PAA(EI)<sub>n</sub> (n = 2, 5.8)) are reported. The architectural effects in particle on the nanoparticle size, size distribution, and agglomeration behavior are determined from the UV-vis plasmon absorption band and transmission electron microscopic (TEM) analyses. The data show that PAA(EI)<sub>n</sub> display better stabilizing effects than PAA to prevent silver particles from agglomeration. Different phenomena of the polymer-protected nanoparticles at various silver ion concns. are observed and are explained in terms of a mechanism of structure-dependent stabilization.

ST silver nanoparticle polyallylamine deriv

IT Nanoparticles

(formation of Silver Nanoparticles under Structured Amino Groups in Pseudo-dendritic Poly(allylamine) Derivs.)

IT 7440-22-4P, Silver, preparation

RL: PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(formation of Silver Nanoparticles under Structured Amino Groups in Pseudo-dendritic Poly(allylamine) Derivs.)

IT 30551-89-4, Polyallylamine

RL: CPS (Chemical process); NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)

(polyethyleneiminated; formation of Silver Nanoparticles under Structured Amino Groups in Pseudo-dendritic Poly(allylamine) Derivs.)

RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Balogh, L; J Am Chem Soc 1998, V120, P7355 CAPLUS
- (2) Chen, D; Mater Res Bull 2002, V37, P801 CAPLUS
- (3) Crooks, R; Acc Chem Res 2001, V34(3), P181 CAPLUS
- (4) Curtis, A; Angew Chem, Int Ed Engl 1988, V27, P1530
- (5) Esumi, K; Langmuir 1998, V14, P3157 CAPLUS
- (6) Esumi, K; Prog Colloid Polym Sci 2001, V117, P80 CAPLUS
- (7) Garcia, M; Anal Chem 1999, V71, P256 CAPLUS
- (8) Haruta, M; J Catal 1989, V115, P301 CAPLUS
- (9) Henglein, A; J Phys Chem B 1999, V103, P9533 CAPLUS
- (10) Kuo, P; J Polym Sci, Part A: Polym Chem 2001, V39(17), P3018 CAPLUS
- (11) Lisiecki, I; J Am Chem Soc 1993, V115, P3887 CAPLUS
- (12) Manna, A; Chem Mater 2001, V13, P1674 CAPLUS
- (13) Manna, A; Langmuir 2001, V17, P6000 CAPLUS
- (14) Mayer, A; Polymer 2000, V41, P1627 CAPLUS
- (15) Morris, T; Langmuir 2002, V18, P535 CAPLUS
- (16) Mostafavi, M; Radiat Phys Chem 1992, V40, P445 CAPLUS
- (17) Mostafavi, M; Radiat Phys Chem 1993, V41, P453 CAPLUS
- (18) Ottaviani, M; Macromolecules 2002, V35, P5105 CAPLUS
- (19) Petit, C; J Phys Chem 1993, V97, P12974 CAPLUS
- (20) Stoeva, S; J Am Chem Soc 2002, V124, P2305 CAPLUS
- (21) Wang, C; Colloid Surf, A 2001, V189, P145 CAPLUS
- (22) Yanagihara, N; Chem Lett 2001, P796 CAPLUS
- (23) Yang, H; Mater Chem Phys 1997, V47, P249 CAPLUS
- (24) Zhang, Z; Polymer 2001, V42, P8315 CAPLUS
- (25) Zhao, M; Chem Mater 1999, V11, P3379 CAPLUS
- (26) Zhao, M; J Am Chem Soc 1998, V120, P4877 CAPLUS
- (27) Zheng, J; J Phys Chem B 2002, V106, P1252 CAPLUS

11/245136

L8 ANSWER 10 OF 19 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2003:551891 CAPLUS  
DN 139:231525  
ED Entered STN: 20 Jul 2003  
TI Preparation of polyelectrolyte-layered assemblies containing cyclodextrin and their binding properties  
AU Sato, Katsuhiko; Suzuki, Iwao; Anzai, Jun-ichi  
CS Graduate School of Pharmaceutical Sciences, Tohoku University, Sendai, 908-8578, Japan  
SO Langmuir (2003), 19(18), 7406-7412  
CODEN: LANGD5; ISSN: 0743-7463  
PB American Chemical Society  
DT Journal  
LA English  
CC 38-2. (Plastics Fabrication and Uses)  
Section cross-reference(s): 41  
AB Polyelectrolyte-layered films containing  $\alpha$ - and  $\beta$ -cyclodextrin were prepared by a layer-by-layer deposition of sulfonated  $\alpha$ - or  $\beta$ -cyclodextrin (s- $\alpha$ -CyD or s- $\beta$ -CyD) and cationic poly(allylamine hydrochloride) (PAH) on a solid surface. The deposition of the films from water solns. (no salt added) afforded thin films in which s- $\alpha$ -CyD and s- $\beta$ -CyD formed roughly a monomol. layer upon each deposition, whereas the films were thicker when a high-ionic-strength buffer was employed as a bathing solution. The PAH-s- $\alpha$ -CyD film bound methyl orange (MO) by forming an inclusion complex in the film, whereas MO did not form the complex with s- $\beta$ -CyD in the PAH-s- $\beta$ -CyD film but formed aggregates on the surface of the film. MO was not desorbed from the films upon rinsing in pure water or even in a HCl solution (pH 2.0), whereas MO was extracted from the film into a NaOH solution (pH 12.0). MO complexed with s- $\alpha$ -CyD in the film was protected from protonation in HCl solution (pH 2.0). The PAH-s- $\alpha$ -CyD film showed a binding selectivity to azoarom. dyes, depending on the size and shape of the dyes.  
ST cyclodextrin polyallylamine polyelectrolyte layered sensor assembly prepn dye binding  
IT Azo dyes  
(aromatic; polyelectrolyte-layered assemblies containing cyclodextrins and their dye-binding properties for use as chemical sensors)  
IT Sensors  
(layered assemblies; polyelectrolyte-layered assemblies containing cyclodextrins and their dye-binding properties for use as chemical sensors)  
IT Monolayers  
Polyelectrolytes  
(polyelectrolyte-layered assemblies containing cyclodextrins and their dye-binding properties for use as chemical sensors)  
IT 71550-12-4, Poly(allylamine hydrochloride)  
RL: NUU (Other use, unclassified); USES (Uses)  
(cationic; polyelectrolyte-layered assemblies containing cyclodextrins and their dye-binding properties for use as chemical sensors)  
IT 7585-39-9D,  $\beta$ -Cyclodextrin, sulfonated 10016-20-3D,  $\alpha$ -Cyclodextrin, sulfonated  
RL: NUU (Other use, unclassified); USES (Uses)  
(polyelectrolyte-layered assemblies containing cyclodextrins and their dye-binding properties for use as chemical sensors)  
IT 547-58-0, Methyl orange  
RL: NUU (Other use, unclassified); PRP (Properties); USES (Uses)  
(polyelectrolyte-layered assemblies containing cyclodextrins and their dye-binding properties for use as chemical sensors)  
RE.CNT 43 THERE ARE 43 CITED REFERENCES AVAILABLE FOR THIS RECORD

for Connie

RE

- (1) Anzai, J; Langmuir 2000, V16, P6306 CAPLUS
- (2) Anzai, J; Macromol Biosci 2002, V2, P361 CAPLUS
- (3) Ariga, K; J Am Chem Soc 1997, V119, P2244
- (4) Bertrand, P; Macromol Rapid Commun 2000, V21, P319 CAPLUS
- (5) Buwalda, R; Langmuir 2001, V17, P1054 CAPLUS
- (6) Calvo, E; J Am Chem Soc 2002, V124, P8490 CAPLUS
- (7) Caruso, F; Macromolecules 1999, V32, P2317 CAPLUS
- (8) Cooper, T; Langmuir 1995, V11, P2713 CAPLUS
- (9) Decher, G; Bunsen Ges Phys Chem 1991, V95, P1430 CAPLUS
- (10) Decher, G; Makromol Chem, Macromol Symp 1991, V46, P321 CAPLUS
- (11) Decher, G; Prog Colloid Polym Sci 1992, V89, P160 CAPLUS
- (12) Decher, G; Science (Washington, D C) 1997, V277, P1232 CAPLUS
- (13) Dubas, S; Macromolecules 1999, V32, P8153 CAPLUS
- (14) Fischer, P; Macromolecules 2000, V33, P9471 CAPLUS
- (15) Fujieda, T; J Colloid Interface Sci 1997, V185, P332 CAPLUS
- (16) Godinez, L; Langmuir 1998, V14, P137 CAPLUS
- (17) Hodak, J; Langmuir 1997, V13, P2708 CAPLUS
- (18) Kohli, P; Langmuir 2000, V16, P4655 CAPLUS
- (19) Kresemann, L; Langmuir 2000, V16, P287
- (20) Laurent, D; Langmuir 1997, V13, P1552 CAPLUS
- (21) Liu, A; Langmuir 2003, V19, P4043 CAPLUS
- (22) Lvov, Y; Colloid Surf, A 1999, V146, P337 CAPLUS
- (23) Lvov, Y; J Am Chem Soc 1995, V117, P6117 CAPLUS
- (24) Lvov, Y; Macromolecules 1993, V26(6), P5396
- (25) Major, J; Langmuir 2001, V17, P1163 CAPLUS
- (26) Narvaez, A; Biosens Bioelectron 2000, V15, P43 CAPLUS
- (27) Rojas, M; J Am Chem Soc 1995, V117, P336 CAPLUS
- (28) Sato, K; Colloid Polym Sci, in press 2003
- (29) Sauerbrey, G; Phys 1959, V155, P206 CAPLUS
- (30) Sawunyama, P; J Colloid Interface Sci 2001, V237, P153 CAPLUS
- (31) Schlenoff, J; J Am Chem Soc 1998, V120, P178
- (32) Suh, J; Bioorg Chem 1994, V22, P318 CAPLUS
- (33) Suzuki, I; Chem Commun 2002, P164 CAPLUS
- (34) Suzuki, I; Macromolecules 2002, V35, P577 CAPLUS
- (35) Suzuki, I; Macromolecules 2002, V35, P6470 CAPLUS
- (36) Suzuki, M; Carbohydr Res 1996, V288, P75 CAPLUS
- (37) Tadeschi, C; J Am Chem Soc 2000, V122, P5841
- (38) Takahashi, M; Thin Solid Films 1997, V307, P274 CAPLUS
- (39) Ueno, A; J Am Chem Soc 1988, V110, P4323 CAPLUS
- (40) Willner, I; J Am Chem Soc 1995, V117, P6581 CAPLUS
- (41) Yang, X; Sens Actuators, B 1997, V45, P87
- (42) Yoo, D; Macromolecules 1998, V31, P44309
- (43) Yoshikawa, Y; Br Polym J 1986, V18, P242 CAPLUS

L8 ANSWER 11 OF 19 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2003:243023 CAPLUS

DN 139:96917

ED Entered STN: 30 Mar 2003

TI Structural regulation of a peptide-conjugated graft copolymer: A simple model for amyloid formation

AU Koga, Tomoyuki; Taguchi, Kazuhiro; Kobuke, Yoshiaki; Kinoshita, Takatoshi; Higuchi, Masahiro

CS Nanoarchitectonics Research Center, National Institute of Advanced Industrial Science and Technology and CREST (Japan Science and Technology), Ibaraki, 305-8565, Japan

SO Chemistry--A European Journal (2003), 9(5), 1146-1156

CODEN: CEUJED; ISSN: 0947-6539

PB Wiley-VCH Verlag GmbH &amp; Co. KGaA

DT Journal

for Connie

11/245136:

LA English  
CC 6-3 (General Biochemistry)  
OS CASREACT 139:96917  
AB The self-assembly of peptides and proteins into  $\beta$ -sheet-rich high-order structures has attracted much attention as a result of the characteristic nanostructure of these assemblies and because of their association with neurodegenerative diseases. Here we report the structural and conformational properties of a peptide-conjugated graft copolymer, poly( $\gamma$ -methyl-L-glutamate) grafted polyallylamine (1) in a water-2,2,2-trifluoroethanol solution as a simple model for amyloid formation. Atomic force microscopy revealed that the globular peptide 1 self-assembles into nonbranching fibrils that are about 4 nm in height under certain conditions. These fibrils are rich in  $\beta$ -sheets and, similar to authentic amyloid fibrils, bind the amyloidophilic dye Congo red. The secondary and quaternary structures of the peptide 1 can be controlled by manipulating the pH, solution composition, and salt concentration; this indicates that the three-dimensional packing arrangement of peptide chains is the key factor for such fibril formation. Furthermore, the addition of carboxylic acid-terminated poly(ethylene glycol), which interacts with both of amino groups of 1 and hydrophobic PMLG chains, was found to obviously inhibit the  $\alpha$ -to- $\beta$  structural transition for non-assembled peptide 1 and to partially cause a  $\beta$ -to- $\alpha$  structural transition against the 1-assembly in the  $\beta$ -sheet form. These findings demonstrate that the amyloid fibril formation is not restricted to specific protein sequences but rather is a generic property of peptides. The ability to control the assembled structure of the peptide should provide useful information not only for understanding the amyloid fibril formation, but also for developing novel peptide-based material with well-defined nanostructures.

ST peptide conjugated graft copolymer amyloid fibril model  
IT Fibril  
(amyloid-like; peptide-conjugated graft copolymer as a simple model for amyloid fibril formation)  
IT Organelle  
(fibril, amyloid-like; peptide-conjugated graft copolymer as a simple model for amyloid fibril formation)  
IT Polymers, biological studies  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(graft; peptide-conjugated graft copolymer as a simple model for amyloid fibril formation)  
IT Self-assembly  
(into amyloid-like fibrils; peptide-conjugated graft copolymer as a simple model for amyloid fibril formation)  
IT Conformation  
 $\beta$ -Sheet  
(peptide-conjugated graft copolymer as a simple model for amyloid fibril formation)  
IT Amyloid  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(peptide-conjugated graft copolymer as a simple model for amyloid fibril formation)  
IT 36877-69-7DP, reaction products with allylamine-Me glutamate graft copolymer/nitrobenzofurazan derivs.  
RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(Rhodamine B-containing peptide-conjugated graft copolymer; peptide-conjugated graft copolymer as a simple model for amyloid fibril formation)

for Connie

- IT 29270-56-2DP, reaction products with allylamine-Me glutamate graft copolymer  
 RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (nitrobenzofurazan-containing peptide-conjugated graft copolymer; peptide-conjugated graft copolymer as a simple model for amyloid fibril formation)
- IT 1663-47-4,  $\gamma$ -Methyl-L-glutamate-N-carboxy anhydride 24424-99-5, Di-tert-butyl dicarbonate 29270-56-2, 4-Fluoro-7-nitrobenzofurazan 30551-89-4, Polyallylamine 36877-69-7, Rhodamine B isothiocyanate  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (peptide-conjugated graft copolymer as a simple model for amyloid fibril formation)
- IT 431047-85-7DP, BOC-protected, benzofurazan derivs., reaction products with Rhodamine B isothiocyanate  
 RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)  
 (peptide-conjugated graft copolymer; peptide-conjugated graft copolymer as a simple model for amyloid fibril formation)

RE.CNT 61 THERE ARE 61 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 RE

- (1) Blow, D; Protein Sci 1994, V3, P1638 CAPLUS
- (2) Cammers-Goodwin, A; J Am Chem Soc 1996, V118, P3082 CAPLUS
- (3) Chen, S; Biochemistry 2002, V41, P7391 CAPLUS
- (4) Chiti, F; Proc Natl Acad Sci USA 1999, V96, P3590 CAPLUS
- (5) Chou, P; Biochemistry 1974, V13, P222 CAPLUS
- (6) Conio, G; J Biol Chem 1970, V245, P3335 CAPLUS
- (7) Cooper, J; Lab Invest 1974, V31, P232 CAPLUS
- (8) Daly, W; Tetrahedron Lett 1988, V29, P5859 CAPLUS
- (9) Dobson, C; Trends Biochem Sci 1999, V24, P329 CAPLUS
- (10) Fandrich, M; Nature 2001, V410, P165 CAPLUS
- (11) Fezoui, Y; Nat Struct Biol 2000, V7, P1095 CAPLUS
- (12) Ghadiri, R; J Am Chem Soc 1992, V114, P825
- (13) Gordon, D; Biochemistry 1972, V11, P413 CAPLUS
- (14) Greenfield, N; Biochemistry 1969, V8, P4108 CAPLUS
- (15) Guijarro, J; Proc Natl Acad Sci USA 1998, V95, P4224 CAPLUS
- (16) Harada, A; Macromolecules 1996, V29, P6183 CAPLUS
- (17) Harper, J; Annu Rev Biochem 1997, V66, P385 CAPLUS
- (18) Harper, J; Biochemistry 1999, V38, P8972 CAPLUS
- (19) Higashi, N; Chem Commun 2000, P361 CAPLUS
- (20) Higashi, N; ChemBioChem 2002, V3, P448 CAPLUS
- (21) Higuchi, M; Langmuir 2000, V16, P7061 CAPLUS
- (22) Hol, W; Nature 1978, V273, P443 CAPLUS
- (23) Howlett, D; Neurodegeneration 1995, V4, P23 MEDLINE
- (24) Jarrett, J; Biochemistry 1992, V31, P12345 CAPLUS
- (25) Kauffmann, E; Proc Natl Acad Sci USA 2001, V98, P6646 CAPLUS
- (26) Kelly, J; Curr Opin Struct Biol 1998, V8, P101 CAPLUS
- (27) Koga, T; Chem Commun 2002, P242 CAPLUS
- (28) Lansbury, P; Proc Natl Acad Sci USA 1999, V96, P3342 CAPLUS
- (29) Lashuel, H; J Am Chem Soc 2000, V122, P5262 CAPLUS
- (30) Lomakin, A; Proc Natl Acad Sci USA 1996, V93, P1125 CAPLUS
- (31) Lorenzo, A; Proc Natl Acad Sci USA 1994, V91, P12243 CAPLUS
- (32) MacPhee, C; J Am Chem Soc 2000, V122, P12707 CAPLUS
- (33) Martsev, S; Biochemistry 2002, V41, P3389 CAPLUS
- (34) Minor, D; Nature 1994, V371, P264 CAPLUS
- (35) Miyazawa, T; J Am Chem Soc 1961, V83, P712 CAPLUS
- (36) Mutter, M; Angew Chem 1989, V101, P551 CAPLUS



- (37) Mutter, M; Angew Chem Int Ed Engl 1989, V28, P535
- (38) Niwa, M; Langmuir 1999, V15, P5088 CAPLUS
- (39) Pemawansa, K; Macromolecules 1999, V32, P1910 CAPLUS
- (40) Pike, C; J Neurosci 1993, V13, P1676 CAPLUS
- (41) Prusiner, S; Science 1991, V252, P1515 CAPLUS
- (42) Puchtler, H; J Histochem Cytochem 1962, V10, P355 CAPLUS
- (43) Ramirez-Aguilar, K; Langmuir 1998, V14, P2562 CAPLUS
- (44) Rathore, O; J Am Chem Soc 2001, V123, P5231 CAPLUS
- (45) Rochet, J; Curr Opin Struct Biol 2000, V10, P60 CAPLUS
- (46) Sakamoto, S; Chem Commun 2000, P1741
- (47) Sasaki, T; J Am Chem Soc 1989, V111, P380 CAPLUS
- (48) Serpell, L; Biochim Biophys Acta 2000, V1502, P16 CAPLUS
- (49) Sipe, J; Crit Rev Clin Lab Sci 1994, V31, P325 CAPLUS
- (50) Storrs, R; Biochemistry 1992, V32, P1695 CAPLUS
- (51) Sunda, M; Adv Protein Chem 1997, V50, P123
- (52) Takabashi, Y; Chem Eur J 1998, V4, P2475
- (53) Takahashi, Y; ChemBioChem 2002, V3, P637 CAPLUS
- (54) Umemura, J; J Phys Chem 1990, V94, P62 CAPLUS
- (55) Villegas, V; Protein Sci 2000, V9, P1700 CAPLUS
- (56) Wada, A; Adv Biophys 1976, V9, P1 CAPLUS
- (57) Wallimann, P; Angew Chem 1999, V111, P1377
- (58) Wallimann, P; Angew Chem Int Ed 1999, V38, P1290 CAPLUS
- (59) Williams, R; Biochim Biophys Acta 1987, V916, P200 CAPLUS
- (60) Zhang, S; Proc Natl Acad Sci USA 1997, V94, P23 CAPLUS
- (61) Zurdo, J; J Mol Biol 2001, V311, P325 CAPLUS

L8 ANSWER 12 OF 19 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2002:885538 CAPLUS

DN 139:85620

ED Entered STN: 22 Nov 2002

TI Spontaneous formation of fibrillar  $\beta$ -sheet assemblies from peptide-grafted polyamine; effect of complexation with poly(ethylene glycol) derivatives

AU Koga, Tomoyuki; Taguchi, Kazuhiro; Higuchi, Masahiro; Kinoshita, Takatoshi

CS Nanoarchitectonics Research Center, National Institute of Advanced Industrial Science and Technology and CREST (Japan Science and Technology), Tsukuba, Ibaraki, 305-8565, Japan

SO Transactions of the Materials Research Society of Japan (2002), 27(3), 493-496

CODEN: TMRJE3; ISSN: 1382-3469

PB Materials Research Society of Japan

DT Journal

LA English

CC 34-3 (Amino Acids, Peptides, and Proteins)

Section cross-reference(s): 22, 35

OS CASREACT 139:85620

AB Amphiphilic graft copolymer, polyallylamine bearing poly( $\gamma$ -methyl-L-glutamate) graft chains (PAAgPMLG), was prepared. The conformation of PAAgPMLG was changed spontaneously from  $\alpha$ -helix to  $\beta$ -sheet only when the amino groups of PAA units were protonated (pH < 8). In this condition, PAAgPMLG formed amyloid-like fibrils with regular quaternary structure. On the other hand, such fibril formation with  $\alpha$ -to- $\beta$  structural transition was obviously inhibited in the presence of carboxylic acid-terminated poly(ethylene glycol), which prevents appropriate folding of peptide graft-chain through the complexation with amino groups of PAAgPMLG. These findings demonstrate that the amyloid fibril formation seems to occur if peptide chains are folded appropriately even at the simple synthetic peptide, which have no specific protein sequences.

ST fibril beta sheet polyglutamate grafted polyallylamine effect

- PEG deriv
- IT Polyoxyalkylenes, uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (amine-terminated; spontaneous formation of fibrillar  $\beta$ -sheet assemblies from polyglutamate-grafted polyallylamine and inhibition in the presence of PEG derivs.)
- IT Polyoxyalkylenes, uses  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (carboxy-terminated; spontaneous formation of fibrillar  $\beta$ -sheet assemblies from polyglutamate-grafted polyallylamine and inhibition in the presence of PEG derivs.)
- IT Conformation  
 Fibril  
 $\beta$ -Sheet  
 (spontaneous formation of fibrillar  $\beta$ -sheet assemblies from polyglutamate-grafted polyallylamine and inhibition in the presence of PEG derivs.)
- IT Amyloid  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (spontaneous formation of fibrillar  $\beta$ -sheet assemblies from polyglutamate-grafted polyallylamine and inhibition in the presence of PEG derivs.)
- IT 25322-68-3D, amine-terminated 25322-68-3D, carboxy-terminated  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (spontaneous formation of fibrillar  $\beta$ -sheet assemblies from polyglutamate-grafted polyallylamine and inhibition in the presence of PEG derivs.)
- IT 431047-85-7P  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (spontaneous formation of fibrillar  $\beta$ -sheet assemblies from polyglutamate-grafted polyallylamine and inhibition in the presence of PEG derivs.)
- IT 1663-47-4 30551-89-4, Polyallylamine  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (spontaneous formation of fibrillar  $\beta$ -sheet assemblies from polyglutamate-grafted polyallylamine and inhibition in the presence of PEG derivs.)
- IT 30551-89-4DP, BOC-protected  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (spontaneous formation of fibrillar  $\beta$ -sheet assemblies from polyglutamate-grafted polyallylamine and inhibition in the presence of PEG derivs.)

RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 RE

- (1) Chiti, F; Proc Natl Acad Sci 1999, V96, P3590 CAPLUS
- (2) Ghadiri, R; J Am Chem Soc 1992, V114, P825
- (3) Glenner, G; Biochem Biophys Res Commun 1984, V122, P1131 CAPLUS
- (4) Greenfield, N; Biochemistry 1969, V8, P4108 CAPLUS
- (5) Guijarro, J; Proc Natl Acad Sci 1998, V95, P4224 CAPLUS
- (6) Harada, A; Macromolecules 1996, V29, P6183 CAPLUS
- (7) Higashi, N; Chem Commun 2000, P361 CAPLUS
- (8) Higuchi, M; Langmuir 2000, V16, P7061 CAPLUS
- (9) Janek, K; Biochemistry 1999, V38, P8246 CAPLUS
- (10) Lansbury, P; Acc Chem Res 1996, V29, P317 CAPLUS
- (11) Lashuel, H; J Am Chem Soc 2000, V122, P5262 CAPLUS
- (12) Miyazawa, T; J Am Chem Soc 1961, V83, P712 CAPLUS
- (13) Mutter, M; Angew Chem, Int Ed 1989, V28, P535
- (14) Pemawansa, K; Macromolecules 1999, V32, P1910 CAPLUS
- (15) Ramirez-Aguilar, K; Langmuir 1998, V14, P2562 CAPLUS

11/245136

- (16) Rochet, J; Curr Opin Struc Biol 2000, V10, P60 CAPLUS
- (17) Sasaki, T; J Am Chem Soc 1989, V111, P380 CAPLUS
- (18) Sipe, J; Crit Rev Clin Lab Sci 1994, V31, P325 CAPLUS
- (19) Takahashi, Y; Chem Eur J 1998, V12, P2475
- (20) Wallimann, P; Angew Chem, Int Ed 1999, V38, P1290 CAPLUS
- (21) Walsh, D; J Biol Chem 1997, V272, P22364 CAPLUS
- (22) Yamada, N; J Am Chem Soc 1998, V120, P12192 CAPLUS

L8 ANSWER 13 OF 19 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2002:106264 CAPLUS

DN 136:295311

ED Entered STN: 10 Feb 2002

TI Layer-by-layer growth of polymer/nanoparticle films containing monolayer-protected gold clusters

AU Hicks, Jocelyn F.; Young, Seok-Shon; Murray, Royce W.

CS Kenan Laboratories of Chemistry, University of North Carolina, Chapel Hill, NC, 27599-3290, USA

SO Langmuir (2002), 18(6), 2288-2294

CODEN: LANGD5; ISSN: 0743-7463

PB American Chemical Society

DT Journal

LA English

CC 36-5 (Physical Properties of Synthetic High Polymers)

Section cross-reference(s): 76

AB Multilayer films of nanoparticles were grown in a systematic and controlled manner layer-by-layer by alternating exposures of suitably functionalized substrates (glass, Au) to either poly(allylamine) and carboxylic acid-functionalized nanoparticles or to poly(styrene sulfonate) and arylamine-functionalized nanoparticles. Electrostatic interactions comprise the dominant film growth factors. The rate of multilayer film growth depends on the polymer solution pH and other details of the solution exposures. Growth was followed by spectrophotometry of the Au nanoparticle cores, voltammetry of the Au core double layer charging, and film mass (quartz crystal microbalance). The first example is reported of quantized double layer charging of the Au cores in a layer-by-layer film that is composed of monolayer-protected clusters and a polyelectrolyte.

ST polyallylamine gold nanoparticle layer deposition electron transport double layer; polystyrene sulfonate gold nanoparticle multilayer electron transport double layer

IT Adsorbed monolayers

Electric capacitance

Electric double layer

Electron transport

Laminated plastic films

Polyelectrolytes

(layer-by-layer growth of polymer/nanoparticle films containing monolayer-protected gold clusters)

IT 1193-02-8, 4-Aminothiophenol 71310-21-9, 11-Mercaptoundecanoic acid

RL: NUU (Other use, unclassified); USES (Uses)

(layer-by-layer growth of polymer/nanoparticle films containing monolayer-protected gold clusters)

IT 25704-18-1, Poly(sodium 4-styrene sulfonate) 71550-12-4,

Polyallylamine hydrochloride

RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); PROC (Process)

(layer-by-layer growth of polymer/nanoparticle films containing monolayer-protected gold clusters)

IT 7440-57-5, Gold, processes

RL: PEP (Physical, engineering or chemical process); PYP (Physical

for Connie

process); PROC (Process)

(layer-by-layer growth of polymer/nanoparticle films containing monolayer-protected gold clusters)

RE.CNT 63 THERE ARE 63 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Abruna, H; J Am Chem Soc 1981, V103, P1 CAPLUS
- (2) Alvarez, M; J Phys Chem B 1997, V101, P3706 CAPLUS
- (3) Auer, F; Langmuir 2000, V16, P7554 CAPLUS
- (4) Bard, A; Electrochemical Methods 2001
- (5) Berven, C; Adv Mater 2001, V13, P109 CAPLUS
- (6) Boal, A; Nature 2000, V404, P746 CAPLUS
- (7) Brust, M; J Chem Soc, Chem Commun 1994, P801 CAPLUS
- (8) Cassagneau, T; J Phys Chem 1999, V103, P1789 CAPLUS
- (9) Cassagneau, T; Langmuir 2000, V16, P241 CAPLUS
- (10) Chen, S; J Phys Chem B 1998, V102, P9898 CAPLUS
- (11) Chen, S; J Phys Chem B 1999, V103, P9996 CAPLUS
- (12) Chen, S; J Phys Chem B 2000, V104, P663 CAPLUS
- (13) Chen, S; Science 1998, V280, P2098 CAPLUS
- (14) Cliffel, D; Langmuir 2000, V16, P9699 CAPLUS
- (15) Cliffel, D; Unpublished results 2000
- (16) Decher, G; Science 1997, V277, P1232 CAPLUS
- (17) Dubas, S; J Am Chem Soc 2001, V123, P5368 CAPLUS
- (18) Dubas, S; Macromolecules 1999, V32, P8153 CAPLUS
- (19) Farhat, T; Langmuir 1999, V15, P6621 CAPLUS
- (20) Feldheim, D; J Am Chem Soc 1996, V118, P7640 CAPLUS
- (21) Fendler, J; Chem Mater 2001, V13(10), P3196 CAPLUS
- (22) Fery, A; Langmuir 2001, V17(13), P3779 CAPLUS
- (23) Gittins, D; J Phys Chem B 2001, V105, P6846 CAPLUS
- (24) Green, S; Langmuir 1998, V14, P5613
- (25) Hao, E; Chem Mater 2000, V13, P3392
- (26) Heeger, A; J Phys Chem B 2001, V105, P8475 CAPLUS
- (27) Henglein, A; Langmuir 1999, V15, P6738 CAPLUS
- (28) Hicks, J; Anal Chem 1999, V71, P3703 CAPLUS
- (29) Hicks, J; J Am Chem Soc 2001, V123, P7048 CAPLUS
- (30) Hicks, J; Manuscript in preparation 2001
- (31) Hicks, J; Unpublished results 2000
- (32) Hostetler, M; Langmuir 1998, V14, P17 CAPLUS
- (33) Ingram, R; J Am Chem Soc 1997, V119, P9175 CAPLUS
- (34) Ingram, R; J Am Chem Soc 1997, V119, P9279 CAPLUS
- (35) Kovtyukhova, N; J Phys Chem B 2001, V105, P8762 CAPLUS
- (36) Kovtyukhova, N; Mater Sci Eng 2000, V70, P424
- (37) Kovtyukhova, N; Thin Solid Films 1999, V337, P166 CAPLUS
- (38) Lee, G; J Am Chem Soc 2001, V123(40), P9769 CAPLUS
- (39) Mamedov, A; J Am Chem Soc 2001, V123, P7738 CAPLUS
- (40) Mamedov, A; Langmuir 2000, V16, P3941 CAPLUS
- (41) Mamedov, A; Langmuir 2000, V16, P5530 CAPLUS
- (42) Marinakos, S; Adv Mater 1999, V11, P34 CAPLUS
- (43) Marinakos, S; J Am Chem Soc 1999, V121, P8518 CAPLUS
- (44) Mulvaney, P; Langmuir 1999, V12, P788
- (45) Ostrander, J; J Am Chem Soc 2001, V123, P1101 CAPLUS
- (46) Pastoriza, I; Langmuir 2000, V16, P2731
- (47) Ramos, A; J Am Chem Soc 2001, V123(27), P6714
- (48) Rhodes, K; Chem Mater 2000, V12, P2832 CAPLUS
- (49) Schlenoff, J; J Am Chem Soc 1998, V120, P7626 CAPLUS
- (50) Shiratori, S; Macromolecules 2000, V33, P4213 CAPLUS
- (51) Shon, Y; Unpublished results 2001
- (52) Sun, Y; Langmuir 1997, V15, P5168
- (53) Templeton, A; Acc Chem Res 2000, V33, P27 CAPLUS
- (54) Templeton, A; J Am Chem Soc 1998, V120, P1906 CAPLUS
- (55) Templeton, A; J Am Chem Soc 1999, V121, P7081 CAPLUS

for Connie

11/245136

- (56) Templeton, A; J Phys Chem B 2000, V104, P564 CAPLUS
- (57) Ung, T; Langmuir 1997, V13, P1773 CAPLUS
- (58) Vezmar, I; Z Phys D 1997, V40, P147 CAPLUS
- (59) Yoo, D; Macromolecules 1998, V31, P4309 CAPLUS
- (60) Yoshikawa, Y; Br Polym J 1986, V18, P242 CAPLUS
- (61) Youk, J; Langmuir 2001, V17, P4681 CAPLUS
- (62) Zalewska, A; J Phys Chem B 2001, V105, P5847 CAPLUS
- (63) Zamborini, F; J Am Chem Soc 2000, V122, P4515

L8 ANSWER 14 OF 19 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2002:97735 CAPLUS  
DN 136:402005  
ED Entered STN: 06 Feb 2002  
TI pH-Regulated formation of amyloid-like  $\beta$ -sheet assemblies from  
polyglutamate grafted polyallylamine  
AU Koga, Tomoyuki; Taguchi, Kazuhiro; Kinoshita, Takatoshi; Higuchi, Masahiro  
CS Nanoarchitectonics Research Center, National Institute of Advanced  
Industrial Science and Technology and CREST, Japan Science and Technology,  
Ibaraki, Tsukuba, 305-8565, Japan  
SO Chemical Communications (Cambridge, United Kingdom) (2002), (3), 242-243  
CODEN: CHCOFS; ISSN: 1359-7345  
PB Royal Society of Chemistry  
DT Journal  
LA English  
CC 34-3 (Amino Acids, Peptides, and Proteins)  
Section cross-reference(s): 22, 35  
AB A novel artificial protein with simple primary structure,  
poly( $\gamma$ -methyl-L-glutamate)-grafted polyallylamine, has  
been prepared and the resultant peptide has shown a unique property of  
pH-regulated conformation and morphol.  
ST pH amyloid like beta sheet polyglutamate grafted polyallylamine  
IT Conformation  
pH  
 $\beta$ -Sheet  
(pH-regulated formation of amyloid-like  $\beta$ -sheet assemblies from  
polyglutamate grafted polyallylamine)  
IT 431047-85-7P  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(pH-regulated formation of amyloid-like  $\beta$ -sheet assemblies from  
polyglutamate grafted polyallylamine)  
IT 1663-47-4 30551-89-4, Polyallylamine  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(pH-regulated formation of amyloid-like  $\beta$ -sheet assemblies from  
polyglutamate grafted polyallylamine)  
IT 30551-89-4DP, BOC-protected  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(pH-regulated formation of amyloid-like  $\beta$ -sheet assemblies from  
polyglutamate grafted polyallylamine)  
RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD  
RE  
(1) Chiti, F; Proc Natl Acad Sci USA 1999, V96, P3590 CAPLUS  
(2) Choo, D; Macromolecules 1996, V29, P355 CAPLUS  
(3) Ghadiri, R; J Am Chem Soc 1992, V114, P825  
(4) Glenner, G; Biochem Biophys Res Commun 1984, V122, P1131 CAPLUS  
(5) Gordon, D; Biochemistry 1972, V11, P413 CAPLUS  
(6) Guijarro, J; Proc Natl Acad Sci USA 1998, V95, P4224 CAPLUS  
(7) Harper, J; Biochemistry 1999, V38, P8972 CAPLUS  
(8) Higashi, N; Chem Commun 2000, P361 CAPLUS  
(9) Higuchi, M; Langmuir 2000, V16, P7061 CAPLUS

for Connie

11/245136

- (10) Janek, K; Biochemistry 1999, V38, P8246 CAPLUS
- (11) Lansbury, P; Acc Chem Res 1996, V29, P317 CAPLUS
- (12) Lashuel, H; J Am Chem Soc 2000, V122, P5262 CAPLUS
- (13) Miyazawa, T; J Am Chem Soc 1961, V83, P712 CAPLUS
- (14) Mutter, M; Angew Chem, Int Ed Engl 1989, V28, P535
- (15) Ramirez-Aguilar, K; Langmuir 1998, V14, P2562 CAPLUS
- (16) Rochet, J; Curr Opin Struc Biol 2000, V10, P60 CAPLUS
- (17) Sasaki, T; J Am Chem Soc 1989, V111, P380 CAPLUS
- (18) Sipe, J; Crit Rev Clin Lab Sci 1994, V31, P325 CAPLUS
- (19) Takahashi, Y; Chem Eur J 1998, V12, P2475
- (20) Takahashi, Y; Structure 2000, V8(9), P915 CAPLUS
- (21) Wallimann, P; Angew Chem, Int Ed 1999, V38, P1290 CAPLUS
- (22) Walsh, D; J Biol Chem 1997, V272, P22364 CAPLUS
- (23) Yamada, N; J Am Chem Soc 1998, V120, P12192 CAPLUS

L8 ANSWER 15 OF 19 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2000:738734 CAPLUS  
DN 133:310972  
ED Entered STN: 19 Oct 2000  
TI Metal articles protected with crosslinked polyamine coating  
IN Keller, Harald; Jaworek, Thomas; Schliephake, Volker; Schroeder, Juergen;  
Sutoris, Heinz Friedrich; Wagenblast, Gerhard  
PA BASF A.-G., Germany  
SO Ger. Offen., 6 pp.  
CODEN: GWXXBX  
DT Patent  
LA German  
IC ICM C09D179-02  
ICS C09D131-02; C09D125-04; B05D007-16; B65D025-14; B65D090-04;  
B01J019-02

CC 42-10 (Coatings, Inks, and Related Products)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 19915116	A1	20001019	DE 1999-19915116	19990401
PRAI	DE 1999-19915116		19990401		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
DE 19915116	ICM	C09D179-02
	ICS	C09D131-02; C09D125-04; B05D007-16; B65D025-14; B65D090-04; B01J019-02
	IPCI	C09D0179-02 [ICM,7]; C09D0179-00 [ICM,7,C*]; C09D0131-02 [ICS,7]; C09D0131-00 [ICS,7,C*]; C09D0125-04 [ICS,7]; C09D0125-00 [ICS,7,C*]; B05D0007-16 [ICS,7]; B65D0025-14 [ICS,7]; B65D0090-04 [ICS,7]; B01J0019-02 [ICS,7]
	IPCR	B01J0019-02 [I,C*]; B01J0019-02 [I,A]; B05D0003-10 [I,C*]; B05D0003-10 [I,A]; B05D0007-16 [I,C*]; B05D0007-16 [I,A]; C09D0179-00 [I,C*]; C09D0179-02 [I,A]
	ECLA	B01J019/02; B05D003/10L3; B05D007/16; C09D179/02

AB Metal articles coated with crosslinked polyamine coatings are claimed. The coatings protect the inner walls of metal containers and reactors against unwanted accumulation of polymers. Thus, a stainless steel net was coated by immersing in aqueous polyethyleneimine solution followed by immersing in aqueous glutaraldehyde solution and drying at ambient temperature

ST polyamine crosslinked coating metal surface protection; coating polyethyleneimine metal surface protection; glutaraldehyde crosslinker polyethyleneimine coating metal surface protection

for Connie

11/245136

IT Coating materials  
(metal articles protected with crosslinked polyamine coating)

IT Polyamines  
RL: TEM (Technical or engineered material use); USES (Uses)  
(polyalkylene-; metal articles protected with crosslinked polyamine coating)

IT 25086-42-4, Poly(4-aminostyrene) 25104-18-1, Polylysine 30551-89-4, Polyallylamine 38000-06-5, Polylysine 75133-03-8, Aziridine-Glutaraldehyde copolymer 111616-54-7, Ethenamine-N-Vinylformamide copolymer  
RL: TEM (Technical or engineered material use); USES (Uses)  
(crosslinked; metal articles protected with crosslinked polyamine coating)

IT 12597-68-1, Stainless steel, processes  
RL: PEP (Physical, engineering or chemical process); PROC (Process)  
(mesh; metal articles protected with crosslinked polyamine coating)

IT 7439-89-6, Iron, miscellaneous 7439-98-7, Molybdenum, miscellaneous 7440-02-0, Nickel, miscellaneous 7440-32-6, Titanium, miscellaneous 7440-47-3, Chromium, miscellaneous 7440-48-4, Cobalt, miscellaneous 7440-62-2, Vanadium, miscellaneous  
RL: MSC (Miscellaneous)  
(metal articles protected with crosslinked polyamine coating)

IT 26336-38-9, Polyvinylamine 75133-03-8D, Aziridine-Glutaraldehyde copolymer, reduced  
RL: TEM (Technical or engineered material use); USES (Uses)  
(metal articles protected with crosslinked polyamine coating)

L8 ANSWER 16 OF 19 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1998:650992 CAPLUS  
DN 129:332238  
ED Entered STN: 14 Oct 1998  
TI Treatment of porous articles and microbiocidal and insect-repellent compositions containing boron compounds for them  
IN Aoki, Hiroshi; Tanaka, Kazumi; Echigo, Takashi  
PA Showa Denko K. K., Japan  
SO Jpn. Kokai Tokkyo Koho, 27 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM C08F002-00  
ICS B05D005-00; B05D007-00; B27K003-02; B27K003-34; B27K003-52; C08G073-00  
CC 42-10 (Coatings, Inks, and Related Products)  
Section cross-reference(s): 5, 16, 43

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 10265508	A	19981006	JP 1997-75267	19970327
PRAI JP 1997-75267		19970327		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
JP 10265508	ICM	C08F002-00
	ICS	B05D005-00; B05D007-00; B27K003-02; B27K003-34; B27K003-52; C08G073-00
	IPCI	C08F0002-00 [ICM,6]; B05D0005-00 [ICS,6]; B05D0007-00 [ICS,6]; B27K0003-02 [ICS,6]; B27K0003-34 [ICS,6]; B27K0003-52 [ICS,6]; C08G0073-00 [ICS,6]
	IPCR	B05D0005-00 [I,A]; B05D0005-00 [I,C*]; B05D0007-00

for Connie

[I,A]; B05D0007-00 [I,C\*]; B27K0003-02 [I,A];  
 B27K0003-02 [I,C\*]; B27K0003-34 [I,A]; B27K0003-34  
 [I,C\*]; B27K0003-52 [I,A]; B27K0003-52 [I,C\*];  
 C08F0002-00 [I,A]; C08F0002-00 [I,C\*]; C08G0073-00  
 [I,A]; C08G0073-00 [I,C\*]

AB Porous articles are immersed in and/or coated with organic compds. having  
 CH<sub>2</sub>:CH, CH:CH, CH<sub>2</sub>:CMe, CH<sub>2</sub>:N, CH:N, NH:CH, NH:N and/or N:N (A), B-containing  
 compds. (B), and polymerization catalysts (C) and polymerized Compns. for the  
 porous

articles comprise A, B, and C. Thus, 1% saponified polymer prepared from  
 acetal protected 4-allyl-1,2-dihydroxybenzene and vinyl acetate,  
 0.6% boric acid, 2% ligninsulfonic acid, 30 ppm polyphenol oxidase was  
 blended to give a solution, in which a chip of wood was immersed. After the  
 solution in the chip was oxidized, polymerized, and mixed with H<sub>2</sub>O, 8% boric

acid

flowed out from the chip.

ST vinyl alc polymer coating porous article; boron blend polymer coating  
 wood; boric acid polymer coating bactericidal fungicidal; rust inhibiting  
 boric acid vinyl coating; insect repellent coating vinyl polymer

IT Coating materials

(anticorrosive; treatment of porous articles with microbiocidal and  
 insect-repellent compns. containing boron compds.)

IT Coating materials

(bactericidal; treatment of porous articles with microbiocidal and  
 insect-repellent compns. containing boron compds.)

IT Insect repellents

(coatings; treatment of porous articles with microbiocidal and  
 insect-repellent compns. containing boron compds.)

IT Coating materials

Coating materials

(fungicidal; treatment of porous articles with microbiocidal and  
 insect-repellent compns. containing boron compds.)

IT Enzymes, uses

RL: CAT (Catalyst use); USES (Uses)

(metallo-, polymerization catalysts; treatment of porous articles with  
 microbiocidal and insect-repellent compns. containing boron compds.)

IT Transition metals, uses

RL: CAT (Catalyst use); USES (Uses)

(polymerization catalysts; treatment of porous articles with microbiocidal

and

insect-repellent compns. containing boron compds.)

IT Polymerization catalysts

Wood

(treatment of porous articles with microbiocidal and insect-repellent  
 compns. containing boron compds.)

IT 7439-89-6, Iron, uses 7439-92-1, Lead, uses 7439-95-4, Magnesium, uses  
 7439-98-7, Molybdenum, uses 7440-02-0, Nickel, uses 7440-05-3,  
 Palladium, uses 7440-22-4, Silver, uses 7440-31-5, Tin, uses  
 7440-32-6, Titanium, uses 7440-36-0, Antimony, uses 7440-38-2,  
 Arsenic, uses 7440-47-3, Chromium, uses 7440-48-4, Cobalt, uses  
 7440-50-8, Copper, uses 7440-67-7, Zirconium, uses

RL: BAC (Biological activity or effector, except adverse); BSU (Biological  
 study, unclassified); BUU (Biological use, unclassified); MOA (Modifier or  
 additive use); BIOL (Biological study); USES (Uses)

(additives; treatment of porous articles with microbiocidal and  
 insect-repellent compns. containing boron compds.)

IT 87-69-4D, cobalt complex, uses 7429-90-5, Aluminum, uses 7440-48-4D,  
 Cobalt, L-tartaric acid complex, uses 7440-66-6, Zinc, uses 9002-10-2,  
 Catechol oxidase 9003-99-0, Peroxidase 9029-44-1, Ascorbate oxidase  
 80498-15-3, Laccase 80619-01-8, Bilirubin oxidase



11/245136

RL: CAT (Catalyst use); USES (Uses)

(polymerization catalyst; treatment of porous articles with microbiocidal

and

insect-repellent compns. containing boron compds.)

IT 87-66-1DP, Pyrogallol, protected, polymer with vinyl acetate and ligninsulfonic acid, saponified 93-15-2DP, 4-Allyl-1,2-dimethoxybenzene, protected, polymer with vinyl acetate and ligninsulfonic acid, saponified 108-05-4DP, Acetic acid ethenyl ester, polymer with dihydroxy compds. and ligninsulfonic acid, saponified, uses 8062-15-5DP, Ligninsulfonic acid, polymer with vinyl acetate and dihydroxy compds., saponified 58169-20-3DP, protected, polymer with vinyl acetate and ligninsulfonic acid, saponified 214957-15-0DP, 4-Allyl-1,2-dimethoxybenzene-lignosulfonic acid-vinyl acetate copolymer, saponified 214957-16-1P, 3,4-Dihydroxybenzaldehyde-ligninsulfonic acid-polyethyleneimine copolymer 214957-17-2P, 3,4-Dihydroxybenzaldehyde-ligninsulfonic acid-polyallylamine copolymer 214957-18-3P 214957-19-4P 214957-20-7P 215231-98-4P 215232-45-4P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); BIOL (Biological study); PREP (Preparation); USES (Uses)

(treatment of porous articles with microbiocidal and insect-repellent compns. containing boron compds.)

IT 118-79-6, 2,4,6-Tribromophenol 154-23-4, (+)-Catechin 499-44-5, Hinokitiol 7173-51-5, Didecyldimethylammonium chloride 7585-20-8, Zirconium acetate 7758-98-7, Copper sulfate, uses 7785-70-8 10025-91-9, Antimony trichloride 10043-35-3, Boric acid (H3BO3), uses RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BUU (Biological use, unclassified); MOA (Modifier or additive use); BIOL (Biological study); USES (Uses)

(treatment of porous articles with microbiocidal and insect-repellent compns. containing boron compds.)

IT 14475-11-7, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(treatment of porous articles with microbiocidal and insect-repellent compns. containing boron compds.)

L8 ANSWER 17 OF 19 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1993:125076 CAPLUS

DN 118:125076

ED Entered STN: 30 Mar 1993

TI Preparation of peptide derivatives and their application as antitumor agents

IN Kitaguchi, Hiroshi; Komazawa, Hiroyuki; Kojima, Masayoshi; Mori, Hideto; Nishikawa, Naoyuki; Satoh, Hideaki; Orikasa, Atsushi; Ono, Mitsunori; Azuma, Ichiro; Saiki, Ikuo

PA Fuji Photo Film Co., Ltd., Japan

SO Eur. Pat. Appl., 69 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM C07K005-08

ICS C07K005-10; C07K015-00; A61K037-02; A61K047-48; C08F289-00; C07K009-00; C08G069-10

CC 34-3 (Amino Acids, Peptides, and Proteins)

Section cross-reference(s): 1

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 503301	A2	19920916	EP 1992-102442	19920213

for Connie

11/245136

EP 503301	A3	19930616		
EP 503301	B1	19971126		
R: DE, GB				
JP 05186499	A	19930727	JP 1992-22799	19920207
JP 2745351	B2	19980428		
EP 619118	A1	19941012	EP 1994-101494	19920213
EP 619118	B1	19970611		
R: DE, GB				
US 5436221	A	19950725	US 1992-834848	19920213
PRAI JP 1991-40860	A	19910214		
JP 1991-297482	A	19911113		
JP 1992-22799	A	19920207		
EP 1992-102442	A3	19920213		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 503301	ICM	C07K005-08
	ICS	C07K005-10; C07K015-00; A61K037-02; A61K047-48; C08F289-00; C07K009-00; C08G069-10
	IPCI	C07K0005-08 [ICM,5]; C07K0005-10 [ICS,5]; C07K0005-00 [ICS,5,C*]; C07K0015-00 [ICS,5]; A61K0037-02 [ICS,5]; A61K0047-48 [ICS,5]; C08F0289-00 [ICS,5]; C07K0009-00 [ICS,5]; C08G0069-10 [ICS,5]; C08G0069-00 [ICS,5,C*]
	IPCR	A61K0038-00 [I,C*]; A61K0038-00 [I,A]; A61K0047-48 [I,C*]; A61K0047-48 [I,A]; A61P0035-00 [I,C*]; A61P0035-00 [I,A]; C07K0005-00 [I,C*]; C07K0005-08 [I,A]; C07K0005-09 [I,A]; C07K0005-10 [I,A]; C07K0005-11 [I,A]; C07K0007-00 [I,C*]; C07K0007-06 [I,A]; C07K0007-08 [I,A]; C07K0009-00 [I,C*]; C07K0009-00 [I,A]; C07K0014-00 [I,C*]; C07K0014-00 [I,A]; C07K0014-435 [I,C*]; C07K0014-78 [I,A]; C07K0017-00 [I,C*]; C07K0017-08 [I,A]; C07K0017-10 [I,A]; C08F0289-00 [I,C*]; C08F0289-00 [I,A]; C08G0069-00 [I,C*]; C08G0069-10 [I,A]
	ECLA	A61K047/48R; C07K005/10B; C07K009/00D; C07K014/78; C08F289/00; C08G069/10; C07K005/08B1
JP 05186499	IPCI	C07K0005-08 [ICM,5]; A61K0037-02 [ICS,5]; C07K0005-10 [ICS,5]; C07K0005-00 [ICS,5,C*]; C07K0007-06 [ICS,5]; C07K0007-08 [ICS,5]; C07K0007-00 [ICS,5,C*]; C07K0007-10 [ICS,5]; C07K0009-00 [ICS,5]; C07K0017-08 [ICS,5]; C07K0017-10 [ICS,5]; C07K0017-00 [ICS,5,C*]; C07K0099-00 [ICI,5]
	IPCR	A61K0038-00 [I,C*]; A61K0038-00 [I,A]; A61K0047-48 [I,C*]; A61K0047-48 [I,A]; A61P0035-00 [I,C*]; A61P0035-00 [I,A]; C07K0005-00 [I,C*]; C07K0005-08 [I,A]; C07K0005-09 [I,A]; C07K0005-10 [I,A]; C07K0005-11 [I,A]; C07K0007-00 [I,C*]; C07K0007-06 [I,A]; C07K0007-08 [I,A]; C07K0009-00 [I,C*]; C07K0009-00 [I,A]; C07K0014-00 [I,C*]; C07K0014-00 [I,A]; C07K0014-435 [I,C*]; C07K0014-78 [I,A]; C07K0017-00 [I,C*]; C07K0017-08 [I,A]; C07K0017-10 [I,A]; C08F0289-00 [I,C*]; C08F0289-00 [I,A]; C08G0069-00 [I,C*]; C08G0069-10 [I,A]
EP 619118	IPCI	A61K0037-02 [ICM,5]
	ECLA	A61K038/06; A61K038/07; A61K038/08; C07K005/10B; C07K009/00D; C07K014/00B; C07K014/78
US 5436221	IPCI	A61K0038-00 [ICM,6]; C07K0005-00 [ICS,6]; C07K0007-00 [ICS,6]; C07K0014-00 [ICS,6]
	IPCR	A61K0038-00 [I,C*]; A61K0038-00 [I,A]; A61K0047-48 [I,C*]; A61K0047-48 [I,A]; A61P0035-00 [I,C*];

for Connie

A61P0035-00 [I,A]; C07K0005-00 [I,C\*]; C07K0005-08 [I,A]; C07K0005-09 [I,A]; C07K0005-10 [I,A]; C07K0005-11 [I,A]; C07K0007-00 [I,C\*]; C07K0007-06 [I,A]; C07K0007-08 [I,A]; C07K0009-00 [I,C\*]; C07K0009-00 [I,A]; C07K0014-00 [I,C\*]; C07K0014-00 [I,A]; C07K0014-435 [I,C\*]; C07K0014-78 [I,A]; C07K0017-00 [I,C\*]; C07K0017-08 [I,A]; C07K0017-10 [I,A]; C08F0289-00 [I,C\*]; C08F0289-00 [I,A]; C08G0069-00 [I,C\*]; C08G0069-10 [I,A]  
 NCL 514/012.000; 514/013.000; 514/014.000; 514/015.000; 514/016.000; 514/017.000; 514/018.000; 530/324.000; 530/325.000; 530/326.000; 530/327.000; 530/328.000; 530/329.000; 530/330.000; 530/331.000  
 ECLA A61K047/48R; C07K005/08B1; C07K005/10B; C07K009/00D; C07K014/78; C08F289/00; C08G069/10  
 OS MARPAT 118:125076  
 AB Fibronectin cell adhesion peptide fragments H-Z-D- or -L-Arg-X-Asp-Y-OH (X = L- or D-Leu, D-Ile, L- or D-Nle, L- or D-Phe, D-phenylglycine, D-Ala; Z, Y = independently bond, amino acid residue, or peptide residue, composed of Gly, Ser, Thr, L- or D-Asp, Ala, D-Glu, Pro), derivs., pharmaceutically acceptable salts, and pharmaceutical compns. comprising them were prepared as agents for inhibiting tumor metastasis.  
 ST antitumor fibronectin peptide fragment; neoplasm inhibitor fibronectin peptide conjugate  
 IT Neoplasm inhibitors  
 (fibronectin cell adhesion peptide fragments and conjugates)  
 IT Fibronectins  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)  
 (conjugates, peptide fragments and, preparation and antitumor activity of)  
 IT 3459-18-5  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (acetylation of)  
 IT 920-46-7  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (amidation of, with alanine)  
 IT 108-55-4  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (amidation of, with aminophenyl glucopyranosamine derivative)  
 IT 145880-89-3 145880-90-6 145880-91-7 145880-92-8 145880-94-0  
 145880-95-1 145880-96-2 145880-97-3 145881-91-0 145881-92-1  
 145881-93-2  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (amidation of, with chitin derivs.)  
 IT 145880-93-9  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (amidation of, with chitin or chondroitin sulfate derivs.)  
 IT 145880-98-4  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (amidation of, with chondroitin sulfate)  
 IT 77-92-9 585-84-2 4023-65-8 26106-63-8 144377-70-8, PEO Acid 4000  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (amidation of, with fibronectin cell adhesion peptide fragments)  
 IT 107-95-9,  $\beta$ -Alanine  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (amidation of, with methacryloyl chloride)  
 IT 145880-99-5 145881-01-2  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (amidation of, with succinylated chondroitin sulfate)  
 IT 145881-00-1

11/245136

RL: RCT (Reactant); RACT (Reactant or reagent)  
(amidation of, with trimellitoylated chondroitin sulfate)

IT 6290-05-7  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(butoxycarbonylation of or double amidation of, with protected iminodiacetic acid)

IT 7284-16-4 7699-38-9  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(conversion of, to fibronectin cell adhesion peptide fragment conjugates)

IT 56808-39-0P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(conversion of, to fibronectin cell adhesion peptide fragment conjugates)

IT 23680-31-1  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(esterification and amidation reactions of)

IT 4530-20-5  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(esterification of, and peptide coupling reactions of, in preparation of fibronectin cell adhesion peptide fragments)

IT 502-85-2  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(esterification of, with benzyl bromide)

IT 79-41-4, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(peptide coupling of, in preparation of fibronectin cell adhesion peptide fragments)

IT 51219-19-3 68262-71-5 145881-13-6  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(peptide coupling of, with tetrapeptide ester)

IT 13139-15-6  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(peptide coupling of, with tripeptide ester)

IT 6404-28-0 7536-58-5 13574-13-5 13734-34-4 16937-99-8 18942-49-9  
33125-05-2 55674-63-0  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(peptide coupling reactions of, in preparation of antitumor peptides)

IT 35150-07-3  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(peptide coupling reactions of, in preparation of fibronectin cell adhesion peptide fragments)

IT 145881-15-8P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and acetylation of)

IT 145881-84-1P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and acidic deblocking of)

IT 145881-64-7P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and addition of, with sodium hydrogen sulfite)

IT 145899-62-3P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and amidation of, with aconitic acid)

IT 145881-69-2P

for Connie

11/245136

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(preparation and amidation of, with aconitic acid tris(aspartic acid)  
derivative)

IT 145881-57-8P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(preparation and amidation of, with citric acid)

IT 69171-62-6P 145881-61-4P 145881-65-8P 145881-76-1P 145881-79-4P  
145881-83-0P 145881-88-5P 145881-89-6P 145881-90-9P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(preparation and amidation of, with fibronectin cell adhesion peptide  
fragments)

IT 65907-85-9P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(preparation and amidation of, with glutaric anhydride)

IT 145881-63-6P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(preparation and amidation of, with iminodiacetic acid-tetracarboxylic acid  
derivative)

IT 145881-82-9P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(preparation and amidation of, with succinic anhydride)

IT 145880-86-0P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(preparation and amidation of, with succinylated polyallylamine)

IT 145881-70-5P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(preparation and amidation of, with triethylenetetramine)

IT 1398-61-4DP, Chitin, acylated with dicarboxylic acid derivs., amides with  
fibronectin cell adhesion peptide fragments 7512-17-6DP, oligomers,  
sulfated, ethers with fibronectin cell adhesion peptide fragments  
9007-28-7DP, acylated with dicarboxylic acid derivs., amides with  
fibronectin cell adhesion peptide fragments 30551-89-4DP, succinylated,  
amides with fibronectin cell adhesion peptide fragments 102567-19-1P  
145880-09-7P 145880-10-0P 145880-11-1P 145880-12-2P 145880-13-3P  
145880-14-4P 145880-15-5P 145880-16-6P 145880-17-7P 145880-18-8P  
145880-19-9P 145880-20-2P 145880-22-4P 145880-26-8P 145880-27-9P  
145880-28-0P 145880-29-1P 145880-32-6P 145880-39-3P 145880-43-9P  
145880-44-0P 145880-50-8P 145880-53-1P 145880-55-3P 145880-59-7P  
145880-61-1P 145880-62-2P 145880-65-5P 145880-67-7P 145880-71-3P  
145880-72-4P 145880-74-6P 145880-76-8P 145880-77-9P 145880-83-7DP,  
ethers with sulfated oligo(acetylglucosamine) 145880-85-9DP, ethers with  
sulfated oligo(acetylglucosamine) 145880-86-0DP, amides with  
succinylated polyallylamine 145880-88-2DP, amides with  
carboxymethylated chitin 145880-93-9DP, amides with succinylated  
carboxymethylated chitin and succinylated chondroitin sulfate  
145880-95-1DP, amides with sulfated carboxymethylated chitin  
145880-99-5DP, amides with succinylated chondroitin sulfate 145881-05-6P  
145881-06-7P 145881-07-8P 145881-11-4P 145881-14-7P 145881-35-2P  
145881-36-3P 145881-37-4P 145881-38-5P 145881-39-6P 145881-40-9P  
145985-74-6P 145985-75-7P 145990-83-6P 145991-05-5P 145991-12-4P  
145991-54-4P 146223-00-9P 146223-04-3P  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological

for Connie

study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)  
 (preparation and antitumor activity of)  
 IT 145881-55-6P 145881-66-9P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and catalytic deesterification of)  
 IT 145881-16-9P 145881-17-0P 145881-58-9P 145881-59-0P 145881-77-2P  
 145899-58-7P 145991-09-9P 145991-24-8P 145991-51-1P 145991-53-3P  
 146225-99-2P 146245-93-4P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and catalytic hydrogenolysis of)  
 IT 13089-27-5P 145881-81-8P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and catalytic reduction of)  
 IT 63024-02-2P 145881-18-1P 145881-42-1P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and deblocking of, with trifluoroacetic acid)  
 IT 145881-53-4P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and desilylation of, with hydrogen fluoride)  
 IT 56074-20-5P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and double amidation of, with iminodiacetate)  
 IT 115692-25-6P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and peptide coupling of, with aspartic acid derivative)  
 IT 145881-67-0P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and peptide coupling of, with fibronectin cell adhesion peptide fragments)  
 IT 145881-86-3P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and peptide coupling of, with glycine derivative)  
 IT 145881-08-9P 145881-20-5P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and peptide coupling of, with leucine derivative)  
 IT 90013-41-5P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and peptide coupling reactions of, in preparation of antitumor peptides)  
 IT 145881-43-2P 145881-49-8P 145881-50-1P 145881-51-2P 145881-52-3P  
 145899-60-1P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and polymerization of)  
 IT 145881-73-8P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation and reductive deesterification of)

11/245136

IT 145881-60-3P 145881-78-3P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(preparation and saponification of)

IT 91970-62-6P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(preparation and silylation of)

IT 63464-05-1P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(preparation and substitution of, with fibronectin cell adhesion peptide  
fragment)

IT 145880-09-7DP, amides with carboxymethylated chitin and itaconylated  
carboxymethylated chitin 145880-10-0DP, amides with succinylated  
polyallylamine, maleylated chondroitin sulfate, and  
cyanuratedcc polyethylene  
glycol 145880-21-3P 145880-23-5P 145880-24-6P 145880-25-7P  
145880-30-4P 145880-31-5P 145880-33-7P 145880-34-8P 145880-35-9P  
145880-36-0P 145880-37-1P 145880-38-2P 145880-40-6P 145880-41-7P  
145880-42-8P 145880-45-1P 145880-46-2P 145880-47-3P 145880-48-4P  
145880-49-5P 145880-51-9P 145880-52-0P 145880-54-2P 145880-56-4P  
145880-57-5P 145880-58-6P 145880-60-0P 145880-63-3P 145880-64-4P  
145880-66-6P 145880-68-8P 145880-69-9P 145880-70-2P 145880-73-5P  
145880-75-7P 145880-78-0P 145880-79-1P 145880-80-4P 145880-81-5P  
145880-82-6DP, ethers with sulfated oligo(acetylglucosamine)  
145880-84-8DP, ethers with sulfated oligo(acetylglucosamine)  
145880-87-1DP, amides with polyallylamine 145880-89-3DP,  
amides with maleylated carboxymethylated chitin 145880-90-6DP, amides  
with phthaloylated carboxymethylated chitin 145880-91-7DP, amides with  
carboxymethylated chitin 145880-92-8DP, amides with carboxymethylated  
chitin 145880-94-0DP, amides with sulfated carboxymethylated chitin  
145880-96-2DP, amides with sulfated succinylated carboxymethylated chitin  
145880-97-3DP, amides with sulfated succinylated carboxymethylated chitin  
145880-98-4DP, amides with chondroitin sulfate 145881-00-1DP, amides  
with trimellitoylated chondroitin sulfate 145881-01-2DP, amides with  
succinylated chondroitin sulfate 145881-02-3P 145881-03-4P  
145881-04-5P 145881-23-8P 145990-75-6P 145990-77-8P 145991-16-8P  
145991-26-0P 145991-60-2P 146223-01-0P 146223-03-2P 146223-06-5P  
146223-07-6P 146223-09-8P 146223-10-1P 146225-95-8P 146225-96-9P  
146225-97-0P 146225-98-1P  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological  
study, unclassified); SPN (Synthetic preparation); BIOL (Biological  
study); PREP (Preparation)  
(preparation of, as antitumor agent)

IT 145881-75-0P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(preparation, catalytic hydrogenolysis, and succinylation of)

IT 145881-87-4P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(preparation, deblocking, and amidation of with aminophenyl glucopyranoside  
derivative)

IT 145991-20-4P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation, deblocking, and amidation of, with methacryloyl chloride)

IT 145881-12-5P 145881-22-7P 145881-29-4P 145881-30-7P 145881-31-8P  
145881-32-9P 145881-33-0P 145881-34-1P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

for Connie

(Reactant or reagent)  
 (preparation, deblocking, and catalytic hydrogenolysis of)

IT 145881-41-0P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (preparation, deblocking, and peptide coupling of, with  
 (carboxyethyl)methacrylamide)

IT 145881-24-9P 145881-25-0P 145881-26-1P 145881-27-2P 145881-28-3P  
 145881-45-4P 145881-72-7P 145899-59-8P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (preparation, deblocking, and peptide coupling of, with arginine derivative)

IT 145881-09-0P 145881-21-6P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (preparation, deblocking, and peptide coupling of, with arginine derivs.)

IT 69871-79-0P 80963-10-6P 130457-93-1P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (preparation, deblocking, and peptide coupling of, with aspartic acid  
 derivative)

IT 145881-46-5P 145881-47-6P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (preparation, deblocking, and peptide coupling of, with glycine derivative)

IT 145881-44-3P 145881-71-6P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (preparation, deblocking, and peptide coupling of, with leucine derivative)

IT 145881-48-7P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (preparation, deblocking, and peptide coupling of, with methacrylic acid)

IT 145881-94-3P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (preparation, deblocking, and peptide coupling of, with polyethylene glycol  
 carboxylic acid derivative)

IT 79113-14-7P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (preparation, deblocking, and peptide coupling of, with serine derivative)

IT 145881-10-3P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (preparation, deblocking, and peptide coupling reactions of)

IT 59178-90-4P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation, polymerization, and peptide coupling of, with fibronectin cell  
 adhesion peptide fragments)

IT 145881-80-7P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (preparation, saponification, sulfation, and catalytic deblocking of)

IT 145881-54-5P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (preparation, sulfation, and catalytic hydrogenolysis of)

IT 145881-85-2P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT



11/245136

(Reactant or reagent)  
(preparation, sulfation, saponification, and catalytic deblocking of)  
IT 30551-89-4  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(sequential succinylation and amidation of, with fibronectin cell  
adhesion peptide fragments)  
IT 9004-74-4  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(substitution of, with cyanuric chloride)  
IT 72708-10-2  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(substitution of, with fibronectin cell adhesion peptide fragment)  
IT 145881-74-9  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(substitution of, with glucopyranosyl bromide)  
IT 108-77-0  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(substitution of, with polyethylene glycol monomethyl ether)  
IT 21085-72-3  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(substitution of, with protected (aminoethoxy)ethanol)  
IT 108-30-5, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(succinylation by, of pentaethylenehexamine)  
IT 4067-16-7  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(succinylation of, with succinic anhydride)  
IT 2791-79-9  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(triple amidation of, with aconitic acid)

L8 ANSWER 18 OF 19 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1993:14861 CAPLUS  
DN 118:14861  
ED Entered STN: 10 Jan 1993  
TI Electrically conductive-polymer-coated metal particles  
IN Hosokawa, Hiroshi; Kamada, Kensuke  
PA Mitsubishi Rayon Co., Ltd., Japan  
SO Eur. Pat. Appl., 10 pp.  
CODEN: EPXXDW

DT Patent

LA English

IC ICM C08K009-10

ICS C08G061-12

CC 76-2 (Electric Phenomena)

Section cross-reference(s): 38

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 488321	A1	19920603	EP 1991-120442	19911128
	EP 488321	B1	19971029		
	R: DE, FR, GB				
	JP 04202707	A	19920723	JP 1990-339674	19901130
	JP 3056522	B2	20000626		
	US 5215820	A	19930601	US 1991-799228	19911127
PRAI	JP 1990-339674	A	19901130		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 488321	ICM	C08K009-10

for Connie

ICS C08G061-12  
 IPCI C08K0009-10 [ICM,5]; C08K0009-00 [ICM,5,C\*];  
 C08G0061-12 [ICS,5]; C08G0061-00 [ICS,5,C\*]  
 IPCR C08K0003-00 [I,C\*]; C08K0003-08 [I,A]; B22F0001-00  
 [I,C\*]; B22F0001-00 [I,A]; B22F0001-02 [I,C\*];  
 B22F0001-02 [I,A]; B22F0009-16 [I,C\*]; B22F0009-20  
 [I,A]; B22F0009-24 [I,A]; C08G0061-00 [I,C\*];  
 C08G0061-12 [I,A]; C08G0069-00 [I,C\*]; C08G0069-02  
 [I,A]; C08K0003-02 [I,A]; C08K0009-00 [I,C\*];  
 C08K0009-04 [I,A]; C08K0009-10 [I,A]; H01B0001-12  
 [I,C\*]; H01B0001-12 [I,A]; H01B0001-22 [I,C\*];  
 H01B0001-22 [I,A]  
 ECLA C08G061/12D1; C08G069/02; C08K009/10; H01B001/12H4;  
 H01B001/22  
 JP 04202707 IPCI B22F0009-20 [ICM,5]; B22F0001-00 [ICS,5]; B22F0001-02  
 [ICS,5]; B22F0009-24 [ICS,5]; B22F0009-16 [ICS,5,C\*];  
 C08K0003-08 [ICS,5]; C08K0003-00 [ICS,5,C\*];  
 C08K0009-04 [ICS,5]; C08K0009-00 [ICS,5,C\*]  
 IPCR C08K0003-00 [I,C\*]; C08K0003-08 [I,A]; B22F0001-00  
 [I,C\*]; B22F0001-00 [I,A]; B22F0001-02 [I,C\*];  
 B22F0001-02 [I,A]; B22F0009-16 [I,C\*]; B22F0009-20  
 [I,A]; B22F0009-24 [I,A]; C08G0061-00 [I,C\*];  
 C08G0061-12 [I,A]; C08G0069-00 [I,C\*]; C08G0069-02  
 [I,A]; C08K0003-02 [I,A]; C08K0009-00 [I,C\*];  
 C08K0009-04 [I,A]; C08K0009-10 [I,A]; H01B0001-12  
 [I,C\*]; H01B0001-12 [I,A]; H01B0001-22 [I,C\*];  
 H01B0001-22 [I,A]  
 US 5215820 IPCI B32B0005-16 [ICM,5]; B32B0015-02 [ICS,5]; B32B0021-02  
 [ICS,5]; B32B0021-00 [ICS,5,C\*]  
 IPCR C08K0003-00 [I,C\*]; C08K0003-08 [I,A]; B22F0001-00  
 [I,C\*]; B22F0001-00 [I,A]; B22F0001-02 [I,C\*];  
 B22F0001-02 [I,A]; B22F0009-16 [I,C\*]; B22F0009-20  
 [I,A]; B22F0009-24 [I,A]; C08G0061-00 [I,C\*];  
 C08G0061-12 [I,A]; C08G0069-00 [I,C\*]; C08G0069-02  
 [I,A]; C08K0003-02 [I,A]; C08K0009-00 [I,C\*];  
 C08K0009-04 [I,A]; C08K0009-10 [I,A]; H01B0001-12  
 [I,C\*]; H01B0001-12 [I,A]; H01B0001-22 [I,C\*];  
 H01B0001-22 [I,A]  
 NCL 428/403.000; 428/328.000; 428/407.000  
 AB Fine metal particles coated with elec. conductive polymers are  
 protected from oxidation and have improved handling properties. The  
 conductive polymer may contain a polymeric electrolyte as a dopant.  
 ST conductive polymer coated metal powder  
 IT Electric conductors.  
 (polymer-coated metal powders as, preparation of)  
 IT 9002-98-6P 9003-01-4P, Polyacrylic acid 25087-26-7P, Polymethacrylic  
 acid 25191-25-7P 26336-38-9P, Polyvinylamine 30551-89-4P,  
 Polyallylamine 50851-57-5P, Polystyrenesulfonic acid  
 144892-84-2P  
 RL: PREP (Preparation)  
 (metal powders coated with conductive polymers doped with, preparation of)  
 IT 25067-54-3P, Polyfuran 25233-30-1P, Polyaniline 25233-34-5P,  
 Polythiophene  
 RL: PREP (Preparation)  
 (metal powders coated with, preparation of)  
 IT 7439-92-1P, Lead, properties 7439-97-6P, Mercury, properties  
 7440-02-0P, Nickel, properties 7440-06-4P, Platinum, properties  
 7440-22-4P, Silver, properties 7440-31-5P, Tin, properties 7440-48-4P,  
 Cobalt, properties 7440-50-8P, Copper, properties 7440-57-5P, Gold,  
 properties 30604-81-0P, Polypyrrole

11/245136

RL: PREP (Preparation)

(powders, coated with elec. conductive polymers, preparation of)

L8 ANSWER 19 OF 19 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 1989:436285 CAPLUS  
DN 111:36285  
ED Entered STN: 05 Aug 1989  
TI A polymer-protected colloidal metal dispersion, a colloidal  
metal complex, and its preparation  
IN Hirai, Hidefumi; Komiyama, Makoto; Otaki, Michitaka  
PA Japan  
SO Eur. Pat. Appl., 52 pp.  
CODEN: EPXXDW  
DT Patent  
LA English  
IC ICM B01J013-00  
ICS A61K047-00; C12N011-14; G01N033-532  
CC 9-14 (Biochemical Methods)  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 252254	A1	19880113	EP 1987-107221	19870518
	EP 252254	B1	19920115		
	R: CH, DE, FR, GB, LI				
	US 4888248	A	19891219	US 1987-46608	19870507
	JP 63283743	A	19881121	JP 1987-162409	19870701
	JP 2528321	B2	19960828		
	JP 01020265	A	19890124	JP 1987-162410	19870701
	JP 2589984	B2	19970312		
	US 5187209	A	19930216	US 1991-745978	19910812
PRAI	JP 1986-152761	A	19860701		
	JP 1986-158676	A	19860708		
	JP 1986-172781	A	19860724		
	JP 1986-172782	A	19860724		
	JP 1986-190435	A	19860815		
	JP 1986-190436	A	19860815		
	JP 1986-298835	A	19861217		
	JP 1986-298836	A	19861217		
	JP 1986-298837	A	19861217		
	JP 1986-298838	A	19861217		
	JP 1986-298839	A	19861217		
	JP 1986-298840	A	19861217		
	US 1987-46608	A3	19870507		
	US 1989-395821	B1	19891006		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 252254	ICM	B01J013-00
	ICS	A61K047-00; C12N011-14; G01N033-532
	IPCI	B01J0013-00 [ICM,4]; A61K0047-00 [ICS,4]; C12N0011-14 [ICS,4]; C12N0011-00 [ICS,4,C*]; G01N0033-532 [ICS,4]
	IPCR	A61K0009-51 [I,A]; A61K0009-51 [I,C*]; A61K0049-00 [I,A]; A61K0049-00 [I,C*]; B01J0013-00 [I,A]; B01J0013-00 [I,C*]; B01J0035-00 [N,A]; B01J0035-00 [N,C*]; C12Q0001-68 [I,A]; C12Q0001-68 [I,C*]
US 4888248	IPCI	A61K0047-00 [ICM,4]; B01J0013-00 [ICS,4]; C12N0011-14 [ICS,4]; C12N0011-00 [ICS,4,C*]; C08K0009-10 [ICS,4]; C08K0009-00 [ICS,4,C*]
	IPCR	A61K0009-51 [I,A]; A61K0009-51 [I,C*]; A61K0049-00 [I,A]; A61K0049-00 [I,C*]; B01J0013-00 [I,A];

for Connie

B01J0013-00 [I,C\*]; B01J0035-00 [N,A]; B01J0035-00 [N,C\*]; C12Q0001-68 [I,A]; C12Q0001-68 [I,C\*]  
 NCL 424/001.290; 424/001.110; 424/009.400; 424/009.420; 427/214.000; 427/216.000; 427/221.000; 428/407.000; 516/077.000; 516/097.000; 523/205.000; 523/206.000; 523/375.000  
 JP 63283743 IPCI B01J0013-00 [ICM,4]; B01J0031-06 [ICS,4]; B01J0035-12 [ICS,4]; B01J0035-00 [ICS,4,C\*]; C08K0003-08 [ICS,4]; C08K0003-00 [ICS,4,C\*]; C08L0057-00 [ICS,4]  
 IPCR B01J0013-00 [I,C\*]; B01J0013-00 [I,A]; B01F0017-52 [I,C\*]; B01F0017-52 [I,A]; B01J0031-06 [I,C\*]; B01J0031-06 [I,A]; B01J0035-00 [I,C\*]; B01J0035-12 [I,A]; C08K0003-00 [I,C\*]; C08K0003-02 [I,A]; C08K0003-08 [I,A]; C08L0057-00 [I,C\*]; C08L0057-00 [I,A]  
 JP 01020265 IPCI C08L0101-00 [ICM,4]; B01J0013-00 [ICS,4]; B01J0031-06 [ICS,4]; C08K0003-08 [ICS,4]; C08K0003-00 [ICS,4,C\*]; A61K0043-00 [ICA,4]; A61K0049-02 [ICA,4]  
 IPCR A61K0051-00 [I,C\*]; A61K0051-00 [I,A]; B01J0013-00 [I,C\*]; B01J0013-00 [I,A]; B01J0031-06 [I,C\*]; B01J0031-06 [I,A]; C08F0008-00 [I,C\*]; C08F0008-30 [I,A]; C08F0008-32 [I,A]; C08K0003-00 [I,C\*]; C08K0003-02 [I,A]; C08K0003-08 [I,A]; C08L0101-00 [I,C\*]; C08L0101-00 [I,A]  
 US 5187209 IPCI A61K0047-00 [ICM,5]; C08K0009-10 [ICS,5]; C08K0009-00 [ICS,5,C\*]; C12N0011-14 [ICS,5]; C12N0011-00 [ICS,5,C\*]  
 IPCR A61K0009-51 [I,C\*]; A61K0009-51 [I,A]; A61K0049-00 [I,C\*]; A61K0049-00 [I,A]; B01J0013-00 [I,C\*]; B01J0013-00 [I,A]; B01J0035-00 [N,C\*]; B01J0035-00 [N,A]; C12N0015-02 [I,C\*]; C12N0015-02 [I,A]; C12Q0001-68 [I,C\*]; C12Q0001-68 [I,A]  
 NCL 424/001.290; 427/214.000; 427/216.000; 427/221.000; 428/403.000; 428/407.000; 516/077.000; 516/078.000; 516/097.000; 523/205.000; 523/206.000; 523/375.000; 524/501.000  
 AB A polymer-protected colloidal metal dispersion comprises (a) a dispersion medium, (b) colloidal particles of Group Ib, VIIB, and VIII metals; and (c) a protective polymer including hydrazide, acrylic, and acrylamide polymers adsorbed on the colloidal particles. The colloidal metal dispersion is highly stable and the colloidal metal particles protected by the polymers can be easily and strongly bound to various amino group-containing compds. to give stable colloidal metal complexes. Acrylamide-N-vinyl-2-pyrrolidone copolymer containing 0.38 mequiv hydrazide groups/g (mol. weight .apprx.28,000) was dissolved in EtOH/H2O (1:1) and mixed with K2PtCl4. The mixture was irradiated with light from a 500-W high-pressure Hg lamp to obtain a uniform blackish-brown dispersion of colloidal Pt protected by the hydrazide group-containing polymer. This polymer-protected colloidal Pt was conjugated to rabbit troponin via glutaraldehyde and the complex was reacted with paracryst. rabbit tropomyosin. The tropomyosin-labeled troponin complex was observed by electron microscopy.  
 ST colloidal metal dispersion polymer protection; platinum colloid hydrazide polymer protection; troponin tropomyosin colloidal platinum complex  
 IT Polyhydrazides  
 Polymers, uses and miscellaneous  
 RL: ANST (Analytical study)  
 (colloidal metals protected by, proteins and other amine-containing compds. labeling with)  
 IT Group IB elements  
 Group VIIB elements

- Group VIII elements  
Metals, reactions  
RL: ANST (Analytical study)  
(colloidal, polymer-protected, proteins and other  
amine-containing compds. labeling with)
- IT Hydrogenation catalysts  
(polymer-protected colloidal rhodium or platinum complexes  
with amino group-containing resins)
- IT Vinyl compounds, compounds  
RL: ANST (Analytical study)  
(amino, complexes, with polymer-protected colloidal metals)
- IT Nucleic acids  
Proteins, specific or class  
RL: ANST (Analytical study)  
(complexes, with polymer-protected colloidal metals)
- IT Troponins  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(complexes, with polymer-protected colloidal platinum and  
tropomyosin, preparation of)
- IT Albumins, compounds  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(complexes, with polymer-protected colloidal silver, preparation  
of)
- IT Tropomyosins  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(complexes, with troponin labeled with polymer-protected  
colloidal platinum, preparation of)
- IT 79-10-7D, 2-Propenoic acid, esters, polymers  
RL: ANST (Analytical study)  
(colloidal metals protected by, proteins and other  
amine-containing compds. labeling with)
- IT 7439-88-5, Iridium, reactions 7440-02-0, Nickel, reactions 7440-04-2,  
Osmium, reactions 7440-05-3, Palladium, reactions 7440-06-4, Platinum,  
reactions 7440-15-5, Rhenium, reactions 7440-16-6, Rhodium, reactions  
7440-18-8, Ruthenium, reactions 7440-22-4, Silver, reactions  
7440-50-8, Copper, reactions 7440-57-5, Gold, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(colloidal, polymer-protected, proteins and other  
amine-containing compds. labeling with)
- IT 110-83-8, Cyclohexene, biological studies  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(hydrogenation of, by Diaion complexes with polymer-protected  
colloidal platinum catalyst)
- IT 107-13-1, Acrylonitrile, reactions 109-92-2, Ethyl vinyl ether  
141-79-7, Mesityl oxide 592-41-6, 1-Hexene, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(hydrogenation of, polymer-protected colloidal  
rhodium-aminoethyl Bio-gel P-150 complex catalyst for)
- IT 9003-05-8DP, Polyacrylamide, aminoalkylated, polymer-protected  
colloidal metal complexes 9036-88-8DP, Mannan, aminated, polymer-  
protected colloidal gold or platinum complexes 9060-90-6DP,  
Polyaminostyrene, polymer-protected colloidal metal complexes  
11028-71-0DP, Concanavalin A, polymer-protected colloidal gold  
complexes 30551-89-4P, Polyallylamine  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)
- IT 26124-23-2DP, Acrylamide-N-vinyl-2-pyrrolidone copolymer, hydrazine or  
azide reaction products  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of and colloidal gold or platinum protection by)

11/245136

IT 119554-16-4DP, hydrazine or azide reaction products  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of and colloidal metal protection by)

IT 64387-83-3P, Acrylamide-methyl vinyl ketone copolymer 76188-67-5P  
119554-14-2P 119554-18-6DP, hydrazine or azide reaction products  
119559-71-6DP, polymers, hydrazine reaction products  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of and colloidal platinum protection by)

IT 25085-37-4P 25655-01-0P 42936-66-3DP, Methacrylic acid-methyl vinyl  
ether copolymer, 4-nitrophenyl ester group-containing  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of and colloidal rhodium protection by)

IT 119554-13-1P 119554-15-3P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of and colloidal silver protection by)

IT 9047-06-7DP, Bio-Gel P 150, aminoethyl derivs., polymer-protected  
colloidal rhodium complexes 62862-86-6DP, Diaion, polymer-  
protected colloidal platinum complexes  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of, as hydrogenation catalysts)

IT 16903-35-8, Chloroauric acid  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, in preparation of polymer-protected colloidal gold)

IT 10025-99-7, Potassium tetrachloroplatinate  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, in preparation of polymer-protected colloidal  
platinum for troponin labeling)

IT 12648-57-6, Rhodium chloride  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, in preparation of polymer-protected colloidal  
rhodium)

IT 7761-88-8, Silver nitrate, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction of, in preparation of polymer-protected colloidal  
silver)

=> FIL REGISTRY

COST IN U.S. DOLLARS	SINCE FILE	TOTAL
	ENTRY	SESSION
FULL ESTIMATED COST	85.56	101.07
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE	TOTAL
	ENTRY	SESSION
CA SUBSCRIBER PRICE	-17.16	-17.16

FILE 'REGISTRY' ENTERED AT 18:50:26 ON 26 JUN 2007  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2007 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file  
provided by InfoChem.

STRUCTURE FILE UPDATES: 25 JUN 2007 HIGHEST RN 939040-66-1  
DICTIONARY FILE UPDATES: 25 JUN 2007 HIGHEST RN 939040-66-1

New CAS Information Use Policies, enter HELP USAGETERMS for details.

for Connie

11/245136

TSCA INFORMATION NOW CURRENT THROUGH December 2, 2006

Please note that search-term pricing does apply when  
conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and  
predicted properties as well as tags indicating availability of  
experimental property data in the original document. For information  
on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=> S 24424-99-5/RN

L9 1 24424-99-5/RN

=> SET NOTICE 1 DISPLAY

NOTICE SET TO 1 U.S. DOLLAR FOR DISPLAY COMMAND  
SET COMMAND COMPLETED

=> D L9 SQIDE 1-

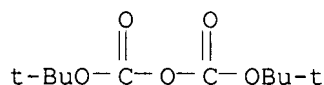
YOU HAVE REQUESTED DATA FROM 1 ANSWERS - CONTINUE? Y/(N):y  
THE ESTIMATED COST FOR THIS REQUEST IS 6.55 U.S. DOLLARS  
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:y

L9 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2007 ACS on STN  
RN 24424-99-5 REGISTRY  
CN Dicarboxylic acid, C,C'-bis(1,1-dimethylethyl) ester (CA INDEX NAME)  
OTHER CA INDEX NAMES:  
CN Dicarboxylic acid, bis(1,1-dimethylethyl) ester (9CI)  
CN Formic acid, oxydi-, di-tert-butyl ester (7CI, 8CI)  
OTHER NAMES:  
CN Bis(1,1-dimethylethyl) dicarbonate  
CN Bis(tert-butyl) dicarbonate  
CN BOC-anhydride  
CN Di-tert-butyl dicarbonate  
CN Di-tert-butyl oxydiformal  
CN Di-tert-butyl pyrocarbonate  
CN Pyrocarbonic acid di-tert-butyl ester  
CN tert-Butoxycarbonyl anhydride  
CN tert-Butyl dicarbonate  
MF C10 H18 O5  
CI COM  
LC STN Files: BEILSTEIN\*, BIOSIS, CA, CAOLD, CAPLUS, CASREACT, CBNB,  
CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHM, GMELIN\*, IPA, MEDLINE,  
MSDS-OHS, PROMT, PS, RTECS\*, SYNTHLINE, TOXCENTER, USPAT2, USPATFULL  
(\*File contains numerically searchable property data)  
Other Sources: DSL\*\*, EINECS\*\*, TSCA\*\*  
(\*Enter CHEMLIST File for up-to-date regulatory information)  
DT.CA Caplus document type: Conference; Journal; Patent; Report  
RL.P Roles from patents: ANST (Analytical study); BIOL (Biological study);  
CMBI (Combinatorial study); MSC (Miscellaneous); OCCU (Occurrence); PREP  
(Preparation); PROC (Process); PRP (Properties); RACT (Reactant or  
reagent); USES (Uses)  
RLD.P Roles for non-specific derivatives from patents: BIOL (Biological  
study); PREP (Preparation); PROC (Process); PRP (Properties); RACT  
(Reactant or reagent); USES (Uses)  
RL.NP Roles from non-patents: ANST (Analytical study); BIOL (Biological

for Connie

11/245136

study); CMBI (Combinatorial study); MSC (Miscellaneous); PREP  
(Preparation); PROC (Process); PRP (Properties); RACT (Reactant or  
reagent); USES (Uses); NORL (No role in record)  
RLD.NP Roles for non-specific derivatives from non-patents: PREP  
(Preparation); PROC (Process); PRP (Properties); RACT (Reactant or  
reagent); USES (Uses)



\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

5370 REFERENCES IN FILE CA (1907 TO DATE)  
163 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA  
5391 REFERENCES IN FILE CAPLUS (1907 TO DATE)  
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> SET NOTICE LOGIN DISPLAY

NOTICE SET TO OFF FOR DISPLAY COMMAND  
SET COMMAND COMPLETED

=>

=> s polyallylamine and l9  
9 POLYALLYLAMINE  
L10 0 POLYALLYLAMINE AND L9

=> s amine and l9  
1767683 AMINE  
L11 0 AMINE AND L9

=> s l9  
L12 1 24424-99-5/RN

=> file caplus  
COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
12.75	113.82

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
0.00	-17.16

CA SUBSCRIBER PRICE

FILE 'CAPLUS' ENTERED AT 18:51:28 ON 26 JUN 2007  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2007 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is  
held by the publishers listed in the PUBLISHER (PB) field (available  
for records published or updated in Chemical Abstracts after December  
26, 1996), unless otherwise indicated in the original publications.  
The CA Lexicon is the copyrighted intellectual property of the

for Connie



11/245136

American Chemical Society and is provided to assist you in searching databases on STN. Any dissemination, distribution, copying, or storing of this information, without the prior written consent of CAS, is strictly prohibited.

FILE COVERS 1907 - 26 Jun 2007 VOL 147 ISS 1  
FILE LAST UPDATED: 25 Jun 2007 (20070625/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

<http://www.cas.org/infopolicy.html>.

=> s 19

L13 5391 L9

=> s 19 and allylamine

5391 L9

7884 ALLYLAMINE

L14 76 L9 AND ALLYLAMINE

=> s 114 and water

2550504 WATER

L15 6 L14 AND WATER

=> s 114 and(aq or water)

1086310 AQ

2550504 WATER

L16 9 L14 AND(AQ OR WATER)

=> d all 1-9

L16 ANSWER 1 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2007:396456 CAPLUS

ED Entered STN: 10 Apr 2007

TI Molecular Basis for Water-Promoted Supramolecular Chirality  
Inversion in Helical Rosette Nanotubes.

AU Johnson, Ross S.; Yamazaki, Takeshi; Kovalenko, Andriy; Fenniri, Hicham

CS National Institute for Nanotechnology, Department of Chemistry and  
Department of Mechanical Engineering, University of Alberta, Edmonton, AB,  
T6G 2M9, Can.

SO Journal of the American Chemical Society (2007), 129(17), 5735-5743  
CODEN: JACSAT; ISSN: 0002-7863

PB American Chemical Society

DT Journal

LA English

CC 22-3 (Physical Organic Chemistry)

Section cross-reference(s): 3, 26, 34

AB Helical rosette nanotubes (RNTs) are obtained through the self-assembly of the G-C motif; a self-complementary DNA base analog featuring the complementary hydrogen bonding arrays of both guanine and cytosine. The first step of this process is the formation of a 6-membered supermacrocycle (rosette) maintained by 18 hydrogen bonds, which then self-organizes into a helical stack defining a supramol. sextuple helix whose chirality and three-dimensional organization arise from the chirality, chemical structure, and conformational organization of the G-C motif. Because a chiral G-C motif is predisposed to express itself asym. upon self-assembly, there is a natural tendency for it to form one chiral RNT over its mirror image. Here the authors describe the synthesis and characterization of a chiral G-C motif that self-assembles into helical

for Connie

RNTs in methanol, but undergoes mirror image supramol. chirality inversion upon the addition of very small amts. of water (<1% volume/volume). Extensive phys. and computational studies established that the mirror-image RNTs obtained, referred to as chiomers, result from thermodyn. (in water) and kinetic (in methanol) self-assembly processes involving two conformational isomers of the parent G-C motif. Although derived from conformational states, the chiomers are thermodynamically stable supramol. species, they display dominant/recessive behavior, they memorize and amplify their chirality in an achiral environment, they change their chirality in response to solvent and temperature, and they catalytically transfer their chirality. A detailed mechanism for supramol. chirality inversion triggered by specific mol. interactions between water mols. and the G-C motif is proposed.

- ST water promoted supramol chirality inversion helical rosette nanotube
- IT INDEXING IN PROGRESS
- IT Catalysts
  - (chirality inversion and transfer; mol. basis for water -promoted supramol. chirality inversion in helical rosette nanotubes)
- IT Hydrogen bond
  - (complimentary; mol. basis for water-promoted supramol. chirality inversion in helical rosette nanotubes)
- IT Nanotubes
  - (helical rosette; mol. basis for water-promoted supramol. chirality inversion in helical rosette nanotubes)
- IT Chemical chains
  - (helical; mol. basis for water-promoted supramol. chirality inversion in helical rosette nanotubes)
- IT Chirality
  - (inversion of supramol.; mol. basis for water-promoted supramol. chirality inversion in helical rosette nanotubes)
- IT Atomic force microscopy
  - Helix (conformation)
  - NMR (nuclear magnetic resonance)
  - Overhauser spectroscopy
  - Rotamers
  - Scanning electron microscopy
  - Self-assembly
  - Self-association
  - Solvent effect
  - Supramolecular structure
  - Transmission electron microscopy
    - (mol. basis for water-promoted supramol. chirality inversion in helical rosette nanotubes)
- IT Nucleic acid bases
  - RL: PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process); PRP (Properties)
  - (mol. basis for water-promoted supramol. chirality inversion in helical rosette nanotubes)
- IT Circular dichroism
  - (normal, time-, and temperature dependent; mol. basis for water -promoted supramol. chirality inversion in helical rosette nanotubes)
- IT 67-56-1, Methanol 7732-18-5, Water
  - RL: CAT (Catalyst use); NUU (Other use, unclassified); USES (Uses)
  - (mol. basis for water-promoted supramol. chirality inversion in helical rosette nanotubes)
- IT 68-12-2, DMF
  - RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
  - (mol. basis for water-promoted supramol. chirality inversion

- in helical rosette nanotubes)
- IT 67-52-7, Barbituric acid 100-51-6, Benzyl alcohol 107-11-9,  
ALLYLamine 1336-21-6, Ammonium hydroxide 5470-11-1,  
Hydroxylamine hydrochloride 10025-87-3, Phosphorus oxychloride  
20816-12-0, Osmium tetroxide 24424-99-5 27738-96-1,  
Carbonisocyanatidic chloride  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(mol. basis for water-promoted supramol. chirality inversion  
in helical rosette nanotubes)
- IT 407-25-0, Trifluoroacetic anhydride 7529-22-8, N-Methylmorpholine  
N-oxide 7790-28-5, Sodium periodate  
RL: RGT (Reagent); RACT (Reactant or reagent)  
(mol. basis for water-promoted supramol. chirality inversion  
in helical rosette nanotubes)
- RE.CNT 83 THERE ARE 83 CITED REFERENCES AVAILABLE FOR THIS RECORD  
RE
- (1) Autschbach, J; J Chem Phys 2002, V116, P6930 CAPLUS
  - (2) Bidan, G; Adv Mater 1996, V8, P157 CAPLUS
  - (3) Blout, E; J Am Chem Soc 1963, V85, P644 CAPLUS
  - (4) Boiadjiev, S; J Am Chem Soc 2000, V122, P378
  - (5) Bonazzi, S; Angew Chem, Int Ed 1993, V32, P248
  - (6) Borovkov, V; Acc Chem Res 2004, V37, P449 CAPLUS
  - (7) Borovkov, V; Angew Chem, Int Ed 2003, V115, P5468
  - (8) Bouman, M; Adv Mater 1995, V7, P385 CAPLUS
  - (9) Celebre, G; J Am Chem Soc 2005, V127, P11736 CAPLUS
  - (10) Cheuk, K; Macromolecules 2003, V36, P9752 CAPLUS
  - (11) Chin, D; J Org Chem 1997, V62, P1891 CAPLUS
  - (12) Cosstick, R; Biochemistry 1985, V24, P3630 CAPLUS
  - (13) Davis, J; Angew Chem, Int Ed 2006, V43, P668
  - (14) de Jong, J; Science 2004, V304, P278 CAPLUS
  - (15) Ducharme, Y; J Org Chem 1988, V53, P5787 CAPLUS
  - (16) Fenniri, H; J Am Chem Soc 2001, V123, P3854 CAPLUS
  - (17) Fenniri, H; J Am Chem Soc 2001, V123, P3854 CAPLUS
  - (18) Fenniri, H; J Am Chem Soc 2002, V124, P11064 CAPLUS
  - (19) Fenniri, H; J Am Chem Soc 2002, V124, P11064 CAPLUS
  - (20) Fenniri, H; Proc Natl Acad Sci U S A 2002, V99(suppl 2), P6487
  - (21) Fenniri, H; Proc Natl Acad Sci USA 2002, V99, P6487 CAPLUS
  - (22) Feringa, B; Angew Chem, Int Ed 1999, V38, P3419
  - (23) Frisch, M; Gaussian 03, Revision C 02 2004
  - (24) Fujiki, M; J Am Chem Soc 2001, V123, P6253 CAPLUS
  - (25) Furukawa, J; Optically Active Polymers 1979, P317 CAPLUS
  - (26) Goto, H; J Am Chem Soc 2002, V124, P7943 CAPLUS
  - (27) Goto, H; Macromolecules 2002, V35, P4590 CAPLUS
  - (28) Gratzner, W; Biopolymers 1963, V1, P319 CAPLUS
  - (29) Green, M; Science 1995, V268, P1860 CAPLUS
  - (30) Haas, A; J Heterocyclic Chem 1986, V23, P1079 CAPLUS
  - (31) Hill, D; Chem Rev 2001, V101, P3893 CAPLUS
  - (32) Hof, F; Angew Chem, Int Ed 2002, V41, P1488 CAPLUS
  - (33) Holmes, A; Adv Supramol Chem 2002, V8, P43 CAPLUS
  - (34) Huck, N; Science 1996, V273, P1686 CAPLUS
  - (35) Hwang, T; J Magn Reson 1995, V112A, P275
  - (36) Jorgensen, W; J Am Chem Soc 1996, V118, P11225 CAPLUS
  - (37) Jorgensen, W; J Am Chem Soc 1996, V118, P11225 CAPLUS
  - (38) Kajitani, T; J Am Chem Soc 2006, V128, P708 CAPLUS
  - (39) Kikuchi, Y; J Am Chem Soc 1992, V114, P1351 CAPLUS
  - (40) Kovalenko, A; J Chem Phys 1999, V110, P10095 CAPLUS
  - (41) Kovalenko, A; J Chem Phys 2000, V112, P10391 CAPLUS
  - (42) Kovalenko, A; Molecular Theory of Solvation 2003, P169 CAPLUS
  - (43) Kovalenko, A; Molecular Theory of Solvation, Series:Understanding Chemical  
Reactivity 2003, V24, P169 CAPLUS

11/245136

- (44) Lam, J; Acc Chem Res 2005, V38, P745 CAPLUS  
(45) Langeveld-Voss, B; Macromolecules 1998, V31, P6702 CAPLUS  
(46) Lauceri, R; J Am Chem Soc 2002, V124, P894 CAPLUS  
(47) Lawrence, D; Chem Rev 1995, V95, P2229 CAPLUS  
(48) Letsinger, R; Proc Robert A Welch Found Conf Chem Res 1985, V29, P459 CAPLUS  
(49) Liu, M; J Magn Reson 1998, V132, P125 CAPLUS  
(50) Loubser, C; J Mater Chem 1994, V4, P71 CAPLUS  
(51) Maeda, K; J Am Chem Soc 2006, V128, P7639 CAPLUS  
(52) Marsh, A; Chem Commun 1996, P1527 CAPLUS  
(53) Mascal, M; Angew Chem, Int Ed 1996, V35, P2204 CAPLUS  
(54) McIntosh, L; Biochemistry 1985, V24, P4806 CAPLUS  
(55) Morales, J; J Am Chem Soc 2005, V127, P8307 CAPLUS  
(56) Morales, J; J Am Chem Soc 2005, V127, P8307 CAPLUS  
(57) Nakako, H; Macromolecules 2001, V34, P1496 CAPLUS  
(58) Nakashima, H; J Am Chem Soc 2001, V123, P1963 CAPLUS  
(59) Okamoto, Y; Chem Lett 1991, P525 CAPLUS  
(60) Okoshi, K; Angew Chem, Int Ed 2006, V45, P1  
(61) Perkyuns, J; J Chem Phys 1992, V97, P7656 CAPLUS  
(62) Piotto, M; J Biomol NMR 1992, V2, P661 CAPLUS  
(63) Pohl, F; J Mol Biol 1972, V67, P375 CAPLUS  
(64) Price, C; J Am Chem Soc 1956, V78, P4789  
(65) Price, W; J Magn Reson 1997, V126, P256 CAPLUS  
(66) Prins, L; Nature 2000, V408, P181 CAPLUS  
(67) Prins, L; Pure Appl Chem 1998, V70, P1459 CAPLUS  
(68) Pu, L; Acta Polym 1997, V8, P116  
(69) Pu, Y; J Am Chem Soc 1993, V115, P377 CAPLUS  
(70) Radley, K; J Phys Chem 1994, V98, P3071 CAPLUS  
(71) Ribo, J; Science 2001, V292, P2063 CAPLUS  
(72) Sakurai, S; J Am Chem Soc 2006, V128, P5650 CAPLUS  
(73) Sakurai, S; J Am Chem Soc 2006, V128, P5650 CAPLUS  
(74) Satrijo, A; J Am Chem Soc 2006, V128, P9030 CAPLUS  
(75) Slaney, A; J Mater Chem 1992, V2, P805 CAPLUS  
(76) Steinberg, I; J Am Chem Soc 1960, V82, P5263 CAPLUS  
(77) Wuthrich, K; NMR of Proteins and Nucleic Acids 1986  
(78) Yang, J; Tetrahedron Lett 1994, V35, P3665 CAPLUS  
(79) Yashima, E; Chem-Eur J 2004, V10, P42 CAPLUS  
(80) Yashima, E; Nature 1999, V399, P449 CAPLUS  
(81) Zahn, S; Science 2000, V288, P1404 CAPLUS  
(82) Zerkowski, J; J Am Chem Soc 1992, V114, P5473 CAPLUS  
(83) Zimmerman, S; J Org Chem 1992, V57, P2215 CAPLUS

L16 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2007:150669 CAPLUS

DN 146:229612

ED Entered STN: 09 Feb 2007

TI Preparation of macrocyclic carboxylic acids, amides, and acylsulfonamides as inhibitors of HCV replication

IN Seiwert, Scott D.; Blatt, Lawrence M.; Andrews, Steven W.; Martin, Pierre; Schumacher, Andreas; Barnett, Bradley R.; Eary, Todd C.; Kaus, Robert; Kercher, Timothy; Liu, Weidong; Lyon, Michael; Nichols, Paul; Wang, Bin; Sammakia, Tarek; Kennedy, April; Jiang, Yutong

PA Intermune, Inc., USA; Array Biopharma Inc.

SO PCT Int. Appl., 512pp.

CODEN: PIXXD2

DT Patent

LA English

CC 34-3 (Amino Acids, Peptides, and Proteins)

Section cross-reference(s): 1, 7, 63

FAN.CNT 1

for Connie

11/245136

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2007015824	A2	20070208	WO 2006-US27738	20060717
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
	RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
	US 2007054842	A1	20070308	US 2006-491126	20060721
PRAI	US 2005-702195P	P	20050725		
	US 2005-725533P	P	20051011		
	US 2006-789800P	P	20060406		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2007015824	IPCI	C07K0005-12 [I,A]; C07K0005-00 [I,C*]; A61K0038-00 [I,A]; A61P0031-14 [I,A]; A61P0031-00 [I,C*]; C07D0209-44 [I,A]; C07D0209-00 [I,C*]; C07C0231-02 [I,A]; C07C0231-00 [I,C*]; C07C0269-00 [I,A]; C07D0207-16 [I,A]; C07D0207-00 [I,C*]
	IPCR	C07K0005-00 [I,C]; C07K0005-12 [I,A]; A61K0038-00 [I,C]; A61K0038-00 [I,A]; A61P0031-00 [I,C]; A61P0031-14 [I,A]; C07C0231-00 [I,C]; C07C0231-02 [I,A]; C07C0269-00 [I,C]; C07C0269-00 [I,A]; C07D0207-00 [I,C]; C07D0207-16 [I,A]; C07D0209-00 [I,C]; C07D0209-44 [I,A]
	ECLA	C07D487/04+245C+209C; C07D471/04+245C+221C; C07D498/04+273C+209C; C07D498/18+263C+245D+209C
US 2007054842	IPCI	A61K0038-12 [I,A]
	IPCR	A61K0038-12 [I,C]; A61K0038-12 [I,A]
	NCL	514/009.000; 530/317.000; 540/456.000
OS	CASREACT	146:229612; MARPAT 146:229612
GI		

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB The invention relates to macrocyclic compds. I and analogs [R1 = H, OC(:O)R1; R1 = (un)substituted N-heteroaryl; R2 = OH, NHR5; R5 = Ph, alkyl, CN, cyclopropylcarbonyl, etc.; R3 = H, CH2R6, CSNH2, (un)substituted thiazol-2-yl, etc.; R6 = CF3, t-Bu, (un)substituted Ph, cyclopropyl, furanyl, etc.; R4 = H, cyclopropylmethyl; the dashed line represents an optional double bond], and their pharmaceutically acceptable salts, prodrugs, and esters for use in pharmaceutical compns. for the treatment of hepatitis C virus (HCV) infection and liver fibrosis. Thus, compound II, prepared by reaction of the macrocyclic prolinol derivative with

CDI in the presence of DCE and treatment with 1-methylcyclopropane-1-sulfonamide in the presence of DBU, showed IC50 < 0.1 µM in the NS3-NS4 protease inhibition assay.

ST peptide macrocyclic carboxylic acid amide acylsulfonamide prepn inhibitor

for Connie

11/245136

HCV  
IT Peptides, preparation  
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(cyclic; preparation of macrocyclic carboxylic acids, amides and acylsulfonamides as inhibitors of HCV replication)  
IT Liver, disease  
(fibrosis; preparation of macrocyclic carboxylic acids, amides and acylsulfonamides as inhibitors of HCV replication)  
IT Fibrosis  
(hepatic; preparation of macrocyclic carboxylic acids, amides and acylsulfonamides as inhibitors of HCV replication)  
IT Drug delivery systems  
(injections, s.c.; preparation of macrocyclic carboxylic acids, amides and acylsulfonamides as inhibitors of HCV replication)  
IT Antiviral agents  
Hepatitis C virus  
Human  
(preparation of macrocyclic carboxylic acids, amides and acylsulfonamides as inhibitors of HCV replication)  
IT Macrocyclic compounds  
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
(preparation of macrocyclic carboxylic acids, amides and acylsulfonamides as inhibitors of HCV replication)  
IT Polyoxyalkylenes, biological studies  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(preparation of macrocyclic carboxylic acids, amides and acylsulfonamides as inhibitors of HCV replication)  
IT Infection  
(viral; preparation of macrocyclic carboxylic acids, amides and acylsulfonamides as inhibitors of HCV replication)  
IT Interferons  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
( $\alpha$ ; preparation of macrocyclic carboxylic acids, amides and acylsulfonamides as inhibitors of HCV replication)  
IT Interferons  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
( $\gamma$ ; preparation of macrocyclic carboxylic acids, amides and acylsulfonamides as inhibitors of HCV replication)  
IT 394730-60-0, SCH 503034 402957-28-2, VX-950 916881-67-9  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(NS3 protease inhibitor; combination therapy agent; preparation of macrocyclic carboxylic acids, amides, and acylsulfonamides as inhibitors of HCV replication)  
IT 3056-17-5 7481-89-2, 2' 3' Dideoxycytidine 30516-87-1, 3' Azidothymidine 36791-04-5, Ribavirin 53179-13-8D, Pirfenidone, analogs 69655-05-6, 2' 3' Dideoxyinosine 113852-37-2, Cidofovir 119567-79-2, Viramidine 122970-40-5, Isatoribine 136470-78-5, Abacavir 142340-99-6 155213-67-5, Ritonavir 165456-81-5, Combivir 170277-31-3, Infliximab 185243-69-0, Etanercept 206269-27-4, Levovirin 331731-18-1, Adalimumab 518974-95-3, Thymosin  $\alpha$   
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(combination therapy agent; preparation of macrocyclic carboxylic acids, amides and acylsulfonamides as inhibitors of HCV replication)  
IT 25322-68-3  
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(conjugates with IFN- $\alpha$ ; combination therapy agents; preparation of

for Connie

macrocyclic carboxylic acids, amides and acylsulfonamides as inhibitors of HCV replication)

IT 118390-30-0  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (conjugates with monoPEG; combination therapy agents; preparation of macrocyclic carboxylic acids, amides and acylsulfonamides as inhibitors of HCV replication)

IT 9026-28-2 9028-93-7  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (inhibitors; combination therapy agents; preparation of macrocyclic carboxylic acids, amides and acylsulfonamides as inhibitors of HCV replication)

IT 149885-80-3, Ns3 ns4a protease  
 RL: BSU (Biological study, unclassified); BIOL (Biological study)  
 (inhibitors; preparation of macrocyclic carboxylic acids, amides and acylsulfonamides as inhibitors of HCV replication)

IT 51108-30-6P 55789-50-9P 685565-15-5P 739365-31-2P 924304-73-4P  
 924304-74-5P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (intermediate; preparation of macrocyclic carboxylic acids, amides, and acylsulfonamides as inhibitors of HCV replication)

IT 924302-42-1P 924305-11-3P 924305-61-3P 924305-75-9P 924305-81-7P  
 924305-84-0P 924305-85-1P 924305-87-3P 924305-90-8P  
 RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
 (preparation of macrocyclic carboxylic acids, amides and acylsulfonamides as inhibitors of HCV replication)

IT 924301-78-0P 924301-79-1P 924301-80-4P 924301-81-5P 924301-82-6P  
 924301-83-7P 924301-84-8P 924301-85-9P 924301-86-0P 924301-87-1P  
 924301-88-2P 924301-89-3P 924301-90-6P 924301-91-7P 924301-92-8P  
 924301-93-9P 924301-94-0P 924301-95-1P 924301-96-2P 924301-97-3P  
 924301-98-4P 924301-99-5P 924302-00-1P 924302-01-2P 924302-02-3P  
 924302-03-4P 924302-04-5P 924302-05-6P 924302-07-8P 924302-09-0P  
 924302-11-4P 924302-13-6P 924302-15-8P 924302-17-0P 924302-19-2P  
 924302-21-6P 924302-23-8P 924302-25-0P 924302-27-2P 924302-28-3P  
 924302-29-4P 924302-30-7P 924302-31-8P 924302-32-9P 924302-33-0P  
 924302-34-1P 924302-35-2P 924302-36-3P 924302-37-4P 924302-38-5P  
 924302-39-6P 924302-40-9P 924302-41-0P 924302-43-2P 924302-44-3P  
 924302-45-4P 924302-46-5P 924302-47-6P 924302-48-7P 924302-49-8P  
 924302-50-1P 924302-51-2P 924302-52-3P 924302-53-4P 924302-54-5P  
 924302-55-6P 924302-56-7P 924302-57-8P 924302-58-9P 924302-59-0P  
 924302-60-3P 924302-61-4P 924302-62-5P 924302-63-6P 924302-64-7P  
 924302-65-8P 924302-66-9P 924302-67-0P 924302-68-1P 924302-69-2P  
 924302-70-5P 924302-71-6P 924302-72-7P 924302-73-8P 924302-74-9P  
 924302-75-0P 924302-76-1P 924302-77-2P 924302-78-3P 924302-79-4P  
 924302-80-7P 924302-81-8P 924302-82-9P 924302-83-0P 924302-84-1P  
 924302-85-2P 924302-86-3P 924302-87-4P 924302-88-5P 924302-89-6P  
 924302-90-9P 924302-91-0P 924302-92-1P 924302-93-2P 924302-94-3P  
 924302-95-4P 924302-96-5P 924302-97-6P 924302-98-7P 924302-99-8P  
 924303-00-4P 924303-01-5P 924303-02-6P 924303-03-7P 924303-04-8P  
 924303-05-9P 924303-06-0P 924303-07-1P 924303-08-2P 924303-09-3P  
 924303-10-6P 924303-11-7P 924303-12-8P 924303-13-9P 924303-14-0P  
 924303-15-1P 924303-16-2P 924303-17-3P 924303-18-4P 924303-19-5P  
 924303-20-8P 924303-21-9P 924303-22-0P 924303-23-1P 924303-24-2P  
 924303-25-3P 924303-26-4P 924303-27-5P 924303-28-6P 924303-29-7P  
 924303-30-0P 924303-31-1P 924303-32-2P 924303-33-3P 924303-34-4P  
 924303-35-5P 924303-36-6P 924303-37-7P 924303-38-8P 924303-39-9P  
 924303-40-2P 924303-41-3P 924303-42-4P 924303-43-5P 924303-44-6P

11/245136

924303-45-7P	924303-46-8P	924303-47-9P	924303-48-0P	924303-49-1P
924303-50-4P	924303-51-5P	924303-52-6P	924303-53-7P	924303-54-8P
924303-55-9P	924303-56-0P	924303-57-1P	924303-58-2P	924303-59-3P
924303-60-6P	924303-61-7P	924303-62-8P	924303-63-9P	924303-64-0P
924303-65-1P	924303-66-2P	924303-67-3P	924303-68-4P	924303-69-5P
924303-70-8P	924303-71-9P	924303-72-0P	924303-73-1P	924303-74-2P
924303-75-3P	924303-76-4P	924303-77-5P	924303-78-6P	924303-79-7P
924303-80-0P	924303-81-1P	924303-82-2P	924303-83-3P	924303-84-4P
924303-85-5P	924303-86-6P	924303-87-7P	924303-88-8P	924303-89-9P
924303-90-2P	924303-91-3P	924303-92-4P	924303-93-5P	924303-94-6P
924303-95-7P	924303-96-8P	924303-97-9P	924303-98-0P	924303-99-1P
924304-00-7P	924304-01-8P	924304-02-9P	924304-03-0P	924304-04-1P
924304-05-2P	924304-06-3P	924304-07-4P	924304-08-5P	924304-09-6P
924304-10-9P	924304-11-0P	924304-13-2P	924304-15-4P	924304-16-5P
924304-17-6P	924304-19-8P	924304-21-2P	924304-22-3P	924304-23-4P
924304-24-5P	924304-25-6P	924304-26-7P	924304-27-8P	

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of macrocyclic carboxylic acids, amides and acylsulfonamides as inhibitors of HCV replication)

IT	924304-28-9P	924304-29-0P	924304-30-3P	924304-31-4P	924304-32-5P
	924304-33-6P	924304-34-7P	924304-35-8P	924304-36-9P	924304-37-0P
	924304-38-1P	924304-39-2P	924304-40-5P	924304-41-6P	924304-42-7P
	924304-43-8P	924304-44-9P	924304-45-0P	924304-46-1P	924304-47-2P
	924304-48-3P	924304-49-4P	924304-50-7P	924304-51-8P	924304-52-9P
	924304-54-1P	924304-55-2P	924304-56-3P	924304-57-4P	924304-58-5P
	924304-59-6P	924304-60-9P	924304-61-0P	924304-62-1P	924304-63-2P
	924304-64-3P	924304-65-4P	924304-66-5P	924304-67-6P	924304-68-7P
	924304-69-8P	924304-70-1P	924304-98-3P	924304-99-4P	924305-18-0P
	924305-20-4P	924305-22-6P	924305-23-7P	924305-25-9P	924305-27-1P
	924305-29-3P	924305-31-7P	924305-33-9P	924305-35-1P	924305-37-3P
	924305-39-5P	924305-40-8P	924305-41-9P	924305-42-0P	924305-43-1P
	924305-44-2P	924305-45-3P	924305-46-4P	924305-47-5P	924305-48-6P
	924305-49-7P	924305-50-0P	924305-51-1P	924305-52-2P	924305-53-3P
	924305-54-4P	924305-55-5P	924305-56-6P	924305-57-7P	924305-58-8P
	924305-59-9P	924305-60-2P	924305-62-4P	924305-63-5P	924305-64-6P
	924305-65-7P	924305-66-8P	924305-67-9P	924305-68-0P	924305-69-1P
	924305-70-4P	924305-71-5P	924305-72-6P	924305-73-7P	924305-74-8P
	924305-76-0P	924305-77-1P	924305-78-2P	924305-79-3P	924305-80-6P
	924305-82-8P	924305-83-9P	924305-86-2P	924305-88-4P	924305-89-5P
	924305-91-9P	924305-92-0P	924305-93-1P	924305-94-2P	924305-95-3P
	924305-96-4P	924305-97-5P	924305-98-6P	924305-99-7P	924306-00-3P
	924306-01-4P	924306-02-5P	924306-03-6P	924306-04-7P	924306-05-8P
	924306-06-9P	924306-07-0P	924306-08-1P	924306-09-2P	924306-10-5P
	924306-11-6P	924306-12-7P	924306-13-8P	924306-14-9P	924306-15-0P
	924306-16-1P	924306-17-2P	924306-18-3P	924306-19-4P	924306-20-7P
	924306-21-8P	924306-22-9P	924306-23-0P	924306-24-1P	924306-25-2P
	924306-26-3P	924306-27-4P	924306-28-5P	924306-29-6P	924306-30-9P
	924306-31-0P	924306-32-1P	924306-33-2P	924306-34-3P	924306-35-4P
	924306-36-5P	924306-37-6P	924306-38-7P	924306-39-8P	924306-40-1P
	924306-41-2P	924306-42-3P	924306-43-4P	924306-44-5P	924306-45-6P
	924306-46-7P	924306-47-8P	924306-48-9P	924306-49-0P	924306-50-3P
	924306-51-4P	924306-52-5P	924306-53-6P	924306-54-7P	924306-55-8P
	924306-56-9P	924306-57-0P	924306-58-1P	924306-59-2P	924306-60-5P
	924306-61-6P	924306-62-7P	924306-63-8P	924306-64-9P	924306-65-0P
	924306-66-1P	924306-67-2P	924306-68-3P	924306-69-4P	924306-70-7P
	924306-71-8P	924306-72-9P	924306-73-0P	924306-74-1P	924306-75-2P
	924306-76-3P	924306-77-4P	924306-78-5P	924306-79-6P	924306-80-9P
	924306-81-0P	924306-82-1P	924306-83-2P	924306-84-3P	924306-85-4P

for Connie



924306-86-5P 924306-87-6P 924306-88-7P 924306-89-8P 924306-90-1P  
 924306-91-2P 924306-92-3P 924306-93-4P 924306-94-5P 924306-95-6P  
 924306-96-7P 924306-97-8P 924306-98-9P 924306-99-0P 924307-00-6P  
 924307-01-7P 924307-02-8P 924307-03-9P 924307-04-0P 924307-05-1P  
 924307-06-2P 924307-07-3P 924307-08-4P 924307-09-5P 924307-10-8P  
 924307-11-9P 924307-12-0P 924307-13-1P 924307-14-2P 924307-15-3P  
 924307-16-4P 924307-17-5P 924307-18-6P 924307-19-7P 924307-20-0P  
 924307-21-1P 924307-22-2P 924307-23-3P 924307-24-4P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU  
 (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES  
 (Uses)

(preparation of macrocyclic carboxylic acids, amides and acylsulfonamides as  
 inhibitors of HCV replication)

IT 924307-25-5P 924307-26-6P 924307-27-7P 924307-28-8P 924307-29-9P  
 924307-30-2P 924307-31-3P 924307-32-4P 924307-33-5P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU  
 (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES  
 (Uses)

(preparation of macrocyclic carboxylic acids, amides and acylsulfonamides as  
 inhibitors of HCV replication)

IT 7732-18-5, Water, uses

RL: NUU (Other use, unclassified); USES (Uses)

(preparation of macrocyclic carboxylic acids, amides, and acylsulfonamides  
 as inhibitors of HCV replication)

IT 916826-48-7P 924305-00-0P 924307-49-3P 924307-72-2P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU  
 (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES  
 (Uses)

(preparation of macrocyclic carboxylic acids, amides, and acylsulfonamides  
 as inhibitors of HCV replication)

IT 64-04-0, Benzeneethanamine 64-10-8, Phenylurea 67-47-0,  
 5-(Hydroxymethyl)furan-2-carboxaldehyde 67-56-1, Methanol, reactions  
 70-11-1, 2-Bromo-1-phenylethanone 75-03-6, Iodoethane 78-81-9,  
 2-Methylpropan-1-amine 90-04-0, 2-Methoxyaniline 95-51-2,  
 2-Chloroaniline 95-76-1, 3,4-Dichloroaniline 96-50-4, 2-Aminothiazole  
 98-64-6, 4-Chlorobenzenesulfonamide 100-61-8, N-Methyl-N-phenylamine,  
 reactions 103-67-3, N-Benzylmethylamine 103-82-2D, 2-Phenylacetic  
 acid, resin-bound 104-01-8D, 2-(4-Methoxyphenyl)acetic acid, resin-bound  
 104-86-9 106-49-0, p-Toluidine, reactions 107-10-8, 1-Propanamine,  
 reactions 107-11-9, Allylamine 108-00-9,  
 N,N-Methyl-1,2-ethanediamine 108-37-2, m-Chlorophenyl bromide  
 108-42-9, 3-Chloroaniline 108-59-8, Dimethyl malonate 109-01-3  
 117-21-5, 3-Chlorophthalic anhydride 124-41-4, Sodium methoxide  
 136-95-8, 2-Benzothiazolamine 319-03-9, 4-Fluorophthalic anhydride  
 371-40-4, 4-Fluoroaniline 401-78-5, m-Trifluoromethylphenyl bromide  
 402-46-0, 4-Fluorobenzenesulfonamide 406-87-1, 4,4,4-Trifluorobutanol  
 406-93-9D, 4,4,4-Trifluorobutanoic acid, resin-bound 431-35-6  
 447-61-0, 2-(Trifluoromethyl)benzaldehyde 454-89-7, 3-  
 (Trifluoromethyl)benzaldehyde 459-59-6 460-40-2, 3,3,3-  
 Trifluoropropanal 496-12-8, 2,3-Dihydro-1H-isoindole 496-13-9  
 503-29-7, Azetidine 536-90-3, 3-Methoxyaniline 589-08-2,  
 N-Methyl-N-(2-phenylethyl)amine 589-16-2, 4-Ethylaniline 606-25-7,  
 1-Naphthalenesulfonamide 620-02-0 622-47-9D, 2-(p-Tolyl)acetic acid,  
 resin-bound 624-78-2, N-Ethylmethylamine 627-27-0, 3-Buten-1-ol  
 630-19-3, 2,2-Dimethylpropanal 672-58-2, 3-(Trifluoromethyl)benzenesulfo  
 namide 701-34-8, 4-Bromobenzenesulfonamide 714-15-8 764-41-0,  
 1,4-Dichloro-2-butene 765-30-0, Cyclopropylamine 821-06-7,  
 (E)-1,4-Dibromobut-2-ene 872-53-7, Cyclopentanecarboxaldehyde  
 1070-83-3D, 3,3-Dimethylbutanoic acid, resin-bound 1123-56-4,  
 2,6-Dimethylbenzaldehyde 1129-26-6, 4-Methoxybenzenesulfonamide

1489-69-6, Cyclopropylcarboxaldehyde 1524-40-9, 3-  
 Fluorobenzenesulfonamide 1576-47-2, 2-Naphthalenesulfonamide  
 1694-92-4, 2-Nitrobenzene-1-sulfonyl chloride 1745-07-9,  
 6,7-Dimethoxy-1,2,3,4-tetrahydroisoquinoline 1878-66-6D,  
 2-(4-Chlorophenyl)acetic acid, resin-bound 2038-03-1,  
 4-Morpholineethanamine 2114-00-3 2179-18-2 2185-03-7 2393-20-6,  
 3-(Aminomethyl)benzoic acid 2413-19-6 2438-38-2,  
 Cyclohexanesulfonamide 2516-34-9, Cyclobutylamine 2516-47-4,  
 [(Cyclopropyl)methyl]amine 2627-86-3, (S)-1-Phenylethanamine  
 2835-77-0, 2-Aminobenzophenone 3118-68-1, 3-Cyanobenzenesulfonamide  
 3119-02-6, 4-Cyanobenzenesulfonamide 3144-04-5, 1-Butanesulfonamide  
 3731-51-9, 2-(Aminomethyl)pyridine 3731-53-1, 4-(Aminomethyl)pyridine  
 3886-69-9, (R)-1-Phenylethanamine 3984-17-6 3984-18-7,  
 N-Cyclohexylsulfamide 4108-90-1, 1-Piperidinesulfonamide 4108-91-2  
 4117-09-3 4466-59-5 4563-33-1, Phenylmethanesulfonamide 5162-44-7,  
 4-Bromobut-1-ene 5231-87-8, 3,4-Diethoxycyclobut-3-ene-1,2-dione  
 5469-26-1 5616-32-0 5813-64-9, 2,2-Dimethylpropan-1-amine 6228-73-5,  
 Cyclopropanecarboxamide 6325-93-5, 4-Nitrobenzenesulfonamide  
 6339-87-3, 2-Thiophenesulfonamide 6961-82-6, 2-Chlorobenzenesulfonamide  
 7103-09-5, But-3-enylmagnesium bromide 7647-01-0, Hydrochloric acid,  
 reactions 7664-41-7, Ammonia, reactions 7681-84-7,  
 Tetrahydrofuran-2-carboxaldehyde 10539-81-8 10539-83-0,  
 (4-Methoxyphenyl)sulfamide 13333-36-3 13726-69-7, (2S,4R)-1-(tert-  
 Butoxycarbonyl)-4-hydroxypyrrolidine-2-carboxylic acid 15211-62-8  
 15761-39-4, (S)-1-(tert-Butoxycarbonyl)pyrrolidine-2-carboxylic acid  
 15959-53-2, Phenylsulfamide 16993-47-8, 2-Phenylethanesulfonamide  
 17260-71-8, 3-Chlorobenzenesulfonamide 19797-32-1, 3,5-  
 Dichlorobenzenesulfonamide 20532-15-4, 2,4-Dichlorobenzenesulfonamide  
 21508-19-0, 5-Chlorofuran-2-carboxaldehyde 22884-29-3,  
 Isobutyltriphenylphosphonium bromide 24243-71-8, Propanesulfonamide  
 24424-99-5, Boc anhydride 26238-14-2, 4-Trifluoromethylphthalic  
 anhydride 27578-60-5, 1-Piperidineethanamine 27757-85-3,  
 (Thiophen-2-yl)methanamine 27854-96-2, (S)-1-(Pyridin-4-yl)ethylamine  
 28460-30-2 30058-40-3, 2-Fluorobenzenesulfonamide 31795-93-4,  
 N-Benzyl-L-proline 32085-88-4, 3,5-Difluorobenzaldehyde 32327-43-8,  
 5-Chloronaphthalene-1-sulfonamide 32857-62-8D, resin-bound 33263-43-3  
 34036-07-2, 3,4-Difluorobenzaldehyde 34813-49-5, tert-Butylsulfonamide  
 35203-92-0 45159-34-0 50392-78-4, 1-(Pyridin-4-yl)ethylamine  
 50715-28-1, Cyclopentyl chloroformate 51108-29-3 52480-43-0,  
 4,5-Dimethylfuran-2-carboxaldehyde 52960-57-3, 2-  
 Methoxybenzenesulfonamide 53595-66-7, 5-Chlorothiophene-2-sulfonamide  
 53595-68-9, 2,5-Dichlorothiophene-3-sulfonamide 58734-57-9,  
 3-Methoxybenzenesulfonamide 59936-29-7 64139-78-2 64984-09-4  
 71799-35-4 72179-85-2 73075-43-1, 5-Chloro-1,2,3,4-  
 tetrahydroisoquinoline 73945-39-8, Cyclopentanesulfonamide 74592-33-9  
 81363-76-0, Isopropylsulfonamide 89315-57-1, 5,8-Dichloro-1,2,3,4-  
 tetrahydroisoquinoline 89556-74-1 89599-01-9, 3-  
 Bromobenzenesulfonamide 89665-79-2 89782-88-7 92748-09-9,  
 2-Bromobenzenesulfonamide 93071-65-9, Methyl 3-(aminomethyl)benzoate  
 98198-68-6 106881-52-1 123126-59-0, Benzo[b]thiophene-2-sulfonamide  
 123594-04-7 127168-81-4 127903-02-0, N-Methyl-N-phenylsulfamide  
 139631-62-2, Cyclopropanesulfonyl chloride 147962-41-2 151838-62-9  
 154350-29-5, Cyclopropanesulfonamide 154743-03-0 154743-05-2,  
 N-Ethyl-N-methylsulfamide 164648-70-8, (4-Cyanophenyl)sulfamide  
 175136-83-1 175137-46-9, 3-Amino-5-cyclopropyl-1H-pyrazole 176673-04-4  
 178324-32-8 188447-91-8, (S)-4-Methylbenzenesulfinamide 196929-78-9,  
 (R)-2-Methylpropane-2-sulfinamide 205487-11-2 213316-49-5  
 247089-85-6 259214-54-5 259214-56-7 343338-28-3,  
 (S)-2-Methylpropane-2-sulfinamide 345579-81-9 351003-57-1  
 351003-58-2 355393-32-7 370881-28-0 372136-73-7,

N-Allyl-N-methylsulfamide 372136-76-0, N-Isopropyl-N-methylsulfamide  
 406923-64-6 446861-28-5 502546-41-0, 3-Amino-5-cyclopropyl-1H-1,2,4-  
 triazole 556068-13-4, (4-Trifluoromethylphenyl)sulfamide 561297-96-9  
 568577-80-0 622815-58-1, 5-Bromo-6-chloropyridine-3-sulfonamide  
 654073-32-2, 1-Azetidinesulfonamide 669008-26-8 669008-28-0  
 669008-34-8 673475-74-6, 3-Amino-4-cyclopropyl-1H-pyrazole 681808-28-6  
 681808-58-2 790304-96-0 790305-00-9 850875-74-0 850875-75-1  
 850875-76-2 850876-30-1 850877-56-4 850877-57-5 866490-15-5  
 866490-16-6 866490-17-7 866490-18-8 878896-99-2 905587-15-7  
 909128-52-5 909128-54-7 924301-77-9 924304-75-6 924304-76-7  
 924305-01-1 924305-02-2 924305-06-6 924307-44-8 924307-51-7  
 924307-66-4 924307-67-5 924307-68-6 924307-69-7 924307-70-0  
 924307-71-1 924307-77-7 924307-78-8 924307-79-9 924307-80-2

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of macrocyclic carboxylic acids, amides, and acylsulfonamides  
 as inhibitors of HCV replication)

IT 924307-81-3 924307-83-5 924307-86-8 924307-87-9 924307-88-0  
 924307-89-1 924307-90-4 924307-91-5 924307-92-6 924307-93-7  
 924307-94-8 924307-95-9 924307-96-0 924307-97-1 924307-98-2  
 924307-99-3 924308-00-9

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of macrocyclic carboxylic acids, amides, and acylsulfonamides  
 as inhibitors of HCV replication)

IT 710-15-6P 4108-88-7P, 1-Pyrrolidinesulfonamide 5615-99-6P  
 14101-58-7P 15159-65-6P 15853-38-0P 17107-21-0P 25999-04-6P,  
 4-Morpholinesulfonamide 29604-19-1P 49690-01-9P 95309-05-0P  
 96293-17-3P 96293-19-5P 98334-89-5P 127168-78-9P,  
 4-Fluoroisindoline 128276-56-2P 147000-78-0P 147091-70-1P  
 154743-01-8P 259214-55-6P 300831-27-0P 552335-44-1P 552335-45-2P  
 862119-82-2P 862273-26-5P 866490-10-0P 889856-28-4P 924304-71-2P  
 924304-72-3P 924304-77-8P 924304-78-9P 924304-79-0P 924304-80-3P  
 924304-81-4P 924304-82-5P 924304-83-6P 924304-84-7P 924304-85-8P  
 924304-86-9P 924304-87-0P 924304-88-1P 924304-89-2P 924304-90-5P  
 924304-91-6P 924304-92-7P 924304-93-8P 924304-94-9P 924304-95-0P  
 924304-96-1P 924304-97-2P 924305-03-3P 924305-04-4P 924305-05-5P  
 924305-07-7P 924305-08-8P 924305-09-9P 924305-10-2P 924305-12-4P  
 924305-13-5P 924305-15-7P 924305-17-9P 924307-34-6P 924307-35-7P  
 924307-36-8P 924307-37-9P 924307-38-0P 924307-39-1P 924307-40-4P  
 924307-41-5P 924307-42-6P 924307-43-7P 924307-45-9P 924307-46-0P  
 924307-47-1P 924307-48-2P 924307-50-6P 924307-52-8P 924307-53-9P  
 924307-54-0P 924307-55-1P 924307-56-2P 924307-57-3P 924307-63-1P  
 924307-64-2P 924307-65-3P 924307-73-3P 924307-74-4P 924307-75-5P  
 924307-76-6P 924307-82-4P 924307-84-6P 924307-85-7P 924669-40-9P  
 924669-41-0P 924669-42-1P 924685-51-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)

(preparation of macrocyclic carboxylic acids, amides, and acylsulfonamides  
 as inhibitors of HCV replication)

IT 87-90-1 109-63-7 110-18-9 1122-58-3, N,N-Dimethylpyridin-4-amine  
 4039-32-1, Lithium hexamethyldisilazide 6674-22-2, 2,3,4,6,7,8,9,10-  
 Octahydropyrimido[1,2-a]azepine 7087-68-5, DIEA 14044-65-6  
 16940-66-2, Sodium borohydride 125700-67-6, TBTU

RL: RGT (Reagent); RACT (Reactant or reagent)

(preparation of macrocyclic carboxylic acids, amides, and acylsulfonamides  
 as inhibitors of HCV replication)

IT 300831-21-4P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of macrocyclic carboxylic acids, amides, and acylsulfonamides  
 as inhibitors of HCV replication)

11/245136

L16 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN  
AN 2006:1155411 CAPLUS  
DN 145:471540  
ED Entered STN: 03 Nov 2006  
TI Preparation of piperidine derivatives as tachykinin receptor antagonists  
IN Nagaoka, Naomi; Marunaka, Shigeyuki; Fukuta, Makoto  
PA Takeda Pharmaceutical Company Limited, Japan  
SO PCT Int. Appl., 323pp.  
CODEN: PIXXD2  
DT Patent  
LA Japanese  
CC 28-10 (Heterocyclic Compounds (More Than One Hetero Atom))  
Section cross-reference(s): 1, 27, 63

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2006115285	A1	20061102	WO 2006-JP308919	20060421
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			

PRAI JP 2005-124335 A 20050421

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2006115285	IPCI	A61K0031-454 [I,A]; A61K0031-4523 [I,C*]; A61K0045-00 [I,A]; A61K0047-10 [I,A]; A61K0047-26 [I,A]; A61K0047-38 [I,A]; A61P0001-00 [I,A]; A61P0001-06 [I,A]; A61P0001-08 [I,A]; A61P0001-12 [I,A]; A61P0013-06 [I,A]; A61P0013-10 [I,A]; A61P0013-00 [I,C*]; A61P0025-22 [I,A]; A61P0025-24 [I,A]; A61P0025-00 [I,C*]; A61P0043-00 [I,A]
	IPCR	A61K0031-4523 [I,C]; A61K0031-454 [I,A]; A61K0045-00 [I,C]; A61K0045-00 [I,A]; A61K0047-10 [I,C]; A61K0047-26 [I,A]; A61K0047-38 [I,C]; A61K0047-38 [I,A]; A61P0001-00 [I,C]; A61P0001-00 [I,A]; A61P0001-06 [I,A]; A61P0001-08 [I,A]; A61P0001-12 [I,A]; A61P0013-00 [I,C]; A61P0013-06 [I,A]; A61P0013-10 [I,A]; A61P0025-00 [I,C]; A61P0025-22 [I,A]; A61P0025-24 [I,A]; A61P0043-00 [I,C]; A61P0043-00 [I,A]
	ECLA	A61K009/20H6F2; A61K009/20H4B

OS MARPAT 145:471540

AB The title compds. (no biol. data) are prepared This document discloses a pharmaceutical composition comprising N-(2-[(3R,4S)-4-((2-methoxy-5-[5-(trifluoromethyl)-1H-tetrazol-1-yl]benzyl)amino)-3-phenylpiperidin-1-yl]-2-oxoethyl)acetamide (I), a salt or a prodrug thereof, a sugar and a hydrophilic water-insol. substance. Thus, N-(2-[(3R,4S)-4-((2-hydroxy-5-[5-(trifluoromethyl)-1H-tetrazol-1-yl]benzyl)amino)-3-phenylpiperidin-1-yl]-2-oxoethyl)acetamide was prepared in 3 steps from (3R,4S)-4-amino-3-phenylpiperidine-1-carboxylic acid tert-Bu ester and 2-hydroxy-5-[5-(trifluoromethyl)-1H-tetrazol-1-yl]benzaldehyde.

for Connie

11/245136

Formulations containing I are given. Tablets containing I showed high elution stability.

- ST piperidine deriv tachykinin receptor antagonist prepn; pharmaceutical compn piperidine deriv tachykinin receptor antagonist prepn
- IT Bladder, disease  
Inflammation  
(cystitis, interstitial; preparation and use of piperidine derivs. as tachykinin receptor antagonists)
- IT Mental and behavioral disorders  
(depression; preparation and use of piperidine derivs. as tachykinin receptor antagonists)
- IT Disease, animal  
(digestion disorder; preparation and use of piperidine derivs. as tachykinin receptor antagonists)
- IT Digestion, biological  
(disease; preparation and use of piperidine derivs. as tachykinin receptor antagonists)
- IT Stability  
(elution stability; of pharmaceutical composition comprising piperidine derivative, salt or prodrug thereof, sugar and hydrophilic water-insol. substance)
- IT Granulation  
(fluid layer; pharmaceutical composition comprising piperidine derivative, salt or prodrug thereof, sugar and hydrophilic water-insol. substance)
- IT Intestine, disease  
(inflammatory; preparation and use of piperidine derivs. as tachykinin receptor antagonists)
- IT Intestine, disease  
(irritable bowel syndrome; preparation and use of piperidine derivs. as tachykinin receptor antagonists)
- IT Urinary system, disease  
(lower urinary tract; preparation and use of piperidine derivs. as tachykinin receptor antagonists)
- IT Mental and behavioral disorders  
(neurosis; preparation and use of piperidine derivs. as tachykinin receptor antagonists)
- IT Crystal structure  
(of piperidine derivative)
- IT Bladder  
(overactive; preparation and use of piperidine derivs. as tachykinin receptor antagonists)
- IT Pain  
(pelvic; preparation and use of piperidine derivs. as tachykinin receptor antagonists)
- IT Granulation  
(pharmaceutical composition comprising piperidine derivative, salt or prodrug thereof, sugar and hydrophilic water-insol. substance)
- IT Alditols  
Carbohydrates, biological studies  
Disaccharides  
RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses).  
(pharmaceutical composition comprising piperidine derivative, salt or prodrug thereof, sugar and hydrophilic water-insol. substance)
- IT Salts, preparation  
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU

for Connie

11/245136

(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(pharmaceutical composition comprising piperidine derivative, salt or prodrug thereof, sugar and hydrophilic water-insol. substance)

IT Analgesics  
Anti-inflammatory agents  
Antidepressants  
Antiemetics  
Anxiety  
Anxiolytics  
Central nervous system, disease  
Central nervous system agents  
Hypnotics and Sedatives  
Insomnia  
Vomiting

(preparation and use of piperidine derivs. as tachykinin receptor antagonists)

IT Tachykinin receptors  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(preparation of piperidine derivs. as tachykinin receptor antagonists)

IT Drug delivery systems  
(prodrugs; pharmaceutical composition comprising piperidine derivative, salt or prodrug thereof, sugar and hydrophilic water-insol. substance)

IT Drug delivery systems  
(solids; pharmaceutical composition comprising piperidine derivative, salt or prodrug thereof, sugar and hydrophilic water-insol. substance)

IT Drug delivery systems  
(tablets; pharmaceutical composition comprising piperidine derivative, salt or prodrug thereof, sugar and hydrophilic water-insol. substance)

IT Granulation  
(wet; pharmaceutical composition comprising piperidine derivative, salt or prodrug thereof, sugar and hydrophilic water-insol. substance)

IT 9004-64-2, Hydroxypropylcellulose  
RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(low substituted; pharmaceutical composition comprising piperidine derivative, salt or prodrug thereof, sugar and hydrophilic water-insol. substance)

IT 9004-34-6, Cellulose, biological studies  
RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(microcryst.; pharmaceutical composition comprising piperidine derivative, salt or prodrug thereof, sugar and hydrophilic water-insol. substance)

IT 69-65-8, Mannitol  
RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(pharmaceutical composition comprising piperidine derivative, salt or prodrug thereof, sugar and hydrophilic water-insol. substance)

for Connie

11/245136

IT 632344-29-7P, cis-4-[[3,5-Bis(trifluoromethyl)benzyl]oxy]-N-methyl-3-phenyl-1-piperidinecarboxamide 632345-06-3P 632350-58-4P  
632352-48-8P 632352-49-9P 632352-50-2P 632352-51-3P  
RL: ANT (Analyte); PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(preparation of piperidine derivs. as tachykinin receptor antagonists)

IT 913092-51-0P 913092-52-1P  
RL: ANT (Analyte); RCT (Reactant); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); RACT (Reactant or reagent)  
(preparation of piperidine derivs. as tachykinin receptor antagonists)

IT 632352-59-1P, trans-4-[(2-Methoxybenzyl)amino]-3-phenylpiperidine-1-carboxylic acid tert-butyl ester  
RL: BYP (Byproduct); PREP (Preparation)  
(preparation of piperidine derivs. as tachykinin receptor antagonists)

IT 913092-71-4P  
RL: PAC (Pharmacological activity); PRP (Properties); PUR (Purification or recovery); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(preparation of piperidine derivs. as tachykinin receptor antagonists)

IT 632344-98-0P 632344-99-1P 632345-01-8P 632345-02-9P 632345-04-1P  
632345-05-2P 632345-10-9P 632345-11-0P 632348-41-5P 632348-42-6P  
632348-43-7P 632348-44-8P 632350-61-9P 632350-62-0P 632352-52-4P  
790657-29-3P 913092-53-2P 913092-54-3P 913092-66-7P 913092-67-8P  
913168-48-6P 913168-49-7P 913168-57-7P 913168-58-8P 913976-52-0P  
913976-53-1P 913976-60-0P 913976-61-1P  
RL: PAC (Pharmacological activity); PUR (Purification or recovery); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(preparation of piperidine derivs. as tachykinin receptor antagonists)

IT 632344-24-2P 632344-25-3P 632344-37-7P 632344-46-8P 632344-47-9P  
632344-48-0P 632344-49-1P 632344-50-4P 632344-51-5P 632345-23-4P  
632345-78-9P 632345-90-5P 632346-45-3P 632346-73-7P 632346-99-7P  
632347-23-0P 632347-42-3P 632347-49-0P 632348-33-5P 632348-71-1P  
632349-13-4P 632349-35-0P 632349-45-2P 632349-47-4P 632349-50-9P  
632349-53-2P 632349-60-1P 632349-63-4P 632349-65-6P 632349-67-8P  
632349-69-0P 632349-71-4P 632349-73-6P 632349-75-8P,  
cis-4-[[3-Nitro-5-(trifluoromethyl)benzyl]oxy]-3-phenylpiperidine  
632349-79-2P 632349-80-5P 632349-95-2P 632350-57-3P 632351-03-2P  
632351-41-8P 632351-43-0P 632351-48-5P 632351-51-0P 632351-54-3P  
632351-58-7P 632351-60-1P 632351-66-7P 632351-72-5P 632351-73-6P  
632351-74-7P 632351-84-9P 632352-34-2P 632352-35-3P 632352-36-4P  
913092-55-4P 913092-56-5P 913092-69-0P  
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
(preparation of piperidine derivs. as tachykinin receptor antagonists)

IT 632344-26-4P 632344-27-5P 632344-28-6P 632344-30-0P 632344-31-1P  
632344-32-2P 632344-33-3P 632344-34-4P 632344-35-5P 632344-36-6P  
632344-38-8P 632344-39-9P 632344-40-2P 632344-41-3P 632344-42-4P  
632344-43-5P 632344-44-6P 632344-45-7P 632344-52-6P 632344-53-7P  
632344-54-8P 632344-55-9P 632344-56-0P 632344-57-1P 632344-58-2P  
632344-59-3P 632344-60-6P 632344-61-7P 632344-62-8P 632344-63-9P  
632344-64-0P 632344-65-1P 632344-66-2P 632344-67-3P 632344-68-4P  
632344-69-5P 632344-70-8P 632344-71-9P 632344-72-0P 632344-73-1P  
632344-74-2P 632344-75-3P 632344-76-4P 632344-77-5P 632344-78-6P  
632344-79-7P 632344-80-0P 632344-81-1P 632344-82-2P 632344-83-3P  
632344-84-4P 632344-85-5P 632344-86-6P 632344-87-7P 632344-88-8P  
632344-89-9P 632344-90-2P 632344-91-3P 632344-92-4P 632344-93-5P,  
(+)-(3R,4S)-1-[(1-Acetyl-4-piperidinyl)carbonyl]-4-[[3,5-

for Connie

bis(trifluoromethyl)benzyl]oxy]-3-phenylpiperidine 632344-94-6P  
 632344-95-7P 632344-96-8P 632344-97-9P 632345-00-7P 632345-03-0P  
 632345-09-6P 632345-13-2P 632345-14-3P 632345-15-4P 632345-16-5P  
 632345-17-6P 632345-18-7P 632345-19-8P 632345-20-1P 632345-21-2P  
 632345-22-3P 632345-24-5P 632345-26-7P 632345-27-8P 632345-28-9P  
 632345-30-3P 632345-31-4P 632345-32-5P 632345-33-6P 632345-34-7P  
 632345-35-8P 632345-36-9P 632345-37-0P 632345-38-1P 632345-39-2P  
 632345-40-5P 632345-41-6P 632345-42-7P 632345-43-8P 632345-45-0P  
 632345-46-1P 632345-47-2P 632345-48-3P 632345-49-4P 632345-50-7P  
 632345-51-8P 632345-52-9P 632345-53-0P 632345-54-1P 632345-55-2P  
 632345-56-3P 632345-57-4P 632345-58-5P 632345-59-6P 632345-60-9P  
 632345-61-0P 632345-62-1P 632345-64-3P 632345-65-4P 632345-66-5P  
 632345-67-6P 632345-68-7P 632345-69-8P 632345-70-1P 632345-71-2P  
 632345-72-3P 632345-73-4P 632345-74-5P 632345-75-6P 632345-77-8P  
 632345-79-0P 632345-80-3P 632345-81-4P 632345-82-5P 632345-83-6P  
 632345-84-7P 632345-85-8P 632345-86-9P 632345-87-0P 632345-88-1P  
 632345-89-2P 632345-91-6P 632345-93-8P 632345-94-9P 632345-95-0P  
 632345-97-2P 632345-98-3P 632345-99-4P 632346-00-0P 632346-01-1P  
 632346-02-2P 632346-03-3P 632346-04-4P 632346-05-5P 632346-06-6P  
 632346-07-7P 632346-08-8P 632346-09-9P 632346-10-2P 632346-11-3P  
 632346-12-4P 632346-13-5P 632346-14-6P 632346-15-7P 632346-16-8P  
 632346-17-9P 632346-18-0P 632346-19-1P 632346-20-4P 632346-21-5P  
 632346-22-6P 632346-23-7P 632346-24-8P 632346-25-9P 632346-26-0P  
 632346-27-1P 632346-28-2P 632346-29-3P 632346-30-6P 632346-31-7P  
 632346-32-8P 632346-33-9P 632346-34-0P 632346-36-2P 632346-37-3P  
 632346-38-4P 632346-39-5P 632346-40-8P 632346-41-9P 632346-42-0P  
 632346-44-2P 632346-46-4P 632346-47-5P 632346-48-6P 632346-49-7P  
 632346-50-0P 632346-51-1P 632346-52-2P 632346-53-3P 632346-54-4P  
 632346-55-5P 632346-56-6P 632346-57-7P 632346-58-8P 632346-59-9P  
 632346-60-2P 632346-61-3P 632346-62-4P 632346-63-5P 632346-64-6P  
 632346-65-7P 632346-66-8P 632346-67-9P 632346-68-0P 632346-69-1P  
 632346-70-4P 632346-71-5P 632346-72-6P 632346-74-8P 632346-75-9P  
 632346-76-0P 632346-77-1P 632346-78-2P 632346-79-3P 632346-80-6P  
 632346-81-7P 632346-82-8P 632346-83-9P 632346-84-0P 632346-85-1P  
 632346-86-2P 632346-87-3P 632346-88-4P 632346-89-5P 632346-90-8P  
 632346-91-9P 632346-92-0P 632346-93-1P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU  
 (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES  
 (Uses)

(preparation of piperidine derivs. as tachykinin receptor antagonists)

IT	632346-94-2P	632346-95-3P	632346-96-4P	632346-97-5P	632346-98-6P
	632347-00-3P	632347-01-4P	632347-02-5P	632347-03-6P	632347-04-7P
	632347-05-8P	632347-06-9P	632347-07-0P	632347-08-1P	632347-09-2P
	632347-10-5P	632347-11-6P	632347-12-7P	632347-13-8P	632347-14-9P
	632347-15-0P	632347-16-1P	632347-17-2P	632347-18-3P	632347-19-4P
	632347-20-7P	632347-21-8P	632347-22-9P	632347-24-1P	632347-25-2P
	632347-26-3P	632347-27-4P	632347-28-5P	632347-29-6P	632347-30-9P
	632347-31-0P	632347-32-1P	632347-33-2P	632347-34-3P	632347-35-4P
	632347-36-5P	632347-37-6P	632347-38-7P	632347-39-8P	632347-40-1P
	632347-41-2P	632347-43-4P	632347-44-5P	632347-45-6P	632347-46-7P
	632347-47-8P	632347-50-3P	632347-51-4P	632347-52-5P	632347-53-6P
	632347-54-7P	632347-55-8P	632347-56-9P	632347-57-0P	632347-58-1P
	632347-59-2P	632347-60-5P	632347-61-6P	632347-62-7P	632347-63-8P
	632347-64-9P	632347-65-0P	632347-66-1P	632347-67-2P	632347-68-3P
	632347-69-4P	632347-70-7P	632347-71-8P	632347-72-9P	632347-74-1P
	632347-75-2P	632347-76-3P	632347-77-4P	632347-78-5P	632347-79-6P
	632347-80-9P	632347-81-0P	632347-82-1P	632347-83-2P	632347-84-3P
	632347-85-4P	632347-86-5P	632347-87-6P	632347-88-7P	632347-89-8P
	632347-90-1P	632347-91-2P	632347-92-3P	632347-93-4P	632347-94-5P
	632347-95-6P	632347-96-7P	632347-97-8P	632347-98-9P	632347-99-0P



11/245136 .

632348-00-6P	632348-01-7P	632348-02-8P	632348-03-9P	632348-05-1P
632348-06-2P	632348-07-3P	632348-08-4P	632348-09-5P	632348-10-8P
632348-11-9P	632348-12-0P	632348-13-1P	632348-14-2P	632348-15-3P
632348-16-4P	632348-17-5P	632348-18-6P	632348-19-7P	632348-20-0P
632348-21-1P	632348-22-2P	632348-23-3P	632348-24-4P	632348-25-5P
632348-26-6P	632348-27-7P	632348-28-8P	632348-29-9P	632348-30-2P
632348-31-3P	632348-32-4P	632348-34-6P	632348-35-7P	632348-36-8P
632348-37-9P	632348-38-0P	632348-39-1P	632348-40-4P	632348-45-9P
632348-47-1P	632348-48-2P	632348-49-3P	632348-50-6P	632348-51-7P
632348-53-9P	632348-54-0P	632348-55-1P	632348-56-2P	632348-57-3P
632348-58-4P	632348-59-5P	632348-60-8P	632348-61-9P	632348-62-0P
632348-63-1P	632348-64-2P	632348-65-3P	632348-66-4P	632348-67-5P
632348-68-6P	632348-69-7P	632348-70-0P	632348-72-2P	632348-73-3P
632348-74-4P	632348-75-5P	632348-76-6P	632348-77-7P	632348-78-8P
632348-79-9P	632348-80-2P	632348-81-3P	632348-82-4P	632348-83-5P
632348-84-6P	632348-85-7P	632348-86-8P	632348-87-9P	632348-88-0P
632348-89-1P	632348-90-4P	632348-91-5P	632348-92-6P	632348-93-7P
632348-94-8P	632348-95-9P	632348-96-0P	632348-97-1P	632348-98-2P
632348-99-3P	632349-00-9P	632349-01-0P	632349-02-1P	632349-03-2P
632349-04-3P	632349-05-4P	632349-06-5P	632349-07-6P	632349-08-7P
632349-09-8P	632349-10-1P	632349-11-2P	632349-12-3P	632349-14-5P
632349-15-6P	632349-16-7P	632349-17-8P	632349-18-9P	632349-19-0P
632349-20-3P	632349-21-4P	632349-22-5P	632349-23-6P	632349-24-7P
632349-25-8P	632349-26-9P	632349-27-0P	632349-28-1P	632349-29-2P
632349-30-5P	632349-31-6P	632349-32-7P	632349-33-8P	632349-34-9P
632349-36-1P	632349-37-2P	632349-38-3P	632349-39-4P	632349-40-7P
632349-41-8P	632349-42-9P	632349-43-0P	632349-44-1P	

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU  
(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES  
(Uses)

(preparation of piperidine derivs. as tachykinin receptor antagonists)

IT	632349-46-3P	632349-48-5P	632349-49-6P	632349-51-0P	632349-52-1P
	632349-54-3P	632349-55-4P	632349-56-5P	632349-57-6P	632349-58-7P
	632349-59-8P	632349-61-2P	632349-62-3P	632349-64-5P	632349-66-7P
	632349-68-9P	632349-70-3P	632349-72-5P	632349-74-7P	632349-76-9P
	632349-77-0P	632349-78-1P	632349-81-6P	632349-82-7P	632349-83-8P
	632349-84-9P	632349-85-0P	632349-86-1P	632349-87-2P	632349-88-3P
	632349-89-4P	632349-91-8P	632349-93-0P	632349-97-4P	632349-99-6P
	632350-01-7P	632350-02-8P	632350-03-9P	632350-04-0P	632350-05-1P
	632350-06-2P	632350-08-4P	632350-10-8P	632350-12-0P	632350-14-2P
	632350-16-4P	632350-18-6P	632350-20-0P	632350-22-2P	632350-24-4P
	632350-26-6P	632350-28-8P	632350-30-2P	632350-32-4P	632350-34-6P
	632350-35-7P	632350-36-8P	632350-37-9P	632350-39-1P	632350-40-4P
	632350-41-5P	632350-43-7P	632350-44-8P	632350-46-0P	632350-47-1P
	632350-48-2P	632350-51-7P	632350-53-9P	632350-55-1P	632350-56-2P
	632350-60-8P	632350-63-1P	632350-64-2P	632350-65-3P	632350-66-4P
	632350-67-5P	632350-68-6P	632350-69-7P	632350-70-0P	632350-71-1P
	632350-72-2P	632350-73-3P	632350-74-4P	632350-75-5P	632350-76-6P
	632350-77-7P	632350-78-8P	632350-79-9P	632350-80-2P	632350-81-3P
	632350-82-4P	632350-83-5P	632350-84-6P	632350-85-7P	632350-86-8P
	632350-87-9P	632350-88-0P	632350-89-1P	632350-90-4P	632350-91-5P
	632350-92-6P	632350-93-7P	632350-94-8P	632350-95-9P	632350-96-0P
	632350-97-1P	632350-98-2P	632350-99-3P	632351-00-9P	632351-01-0P
	632351-02-1P	632351-04-3P	632351-05-4P	632351-06-5P	632351-07-6P
	632351-08-7P	632351-09-8P	632351-10-1P	632351-11-2P	632351-12-3P
	632351-13-4P	632351-14-5P	632351-15-6P	632351-16-7P	632351-17-8P
	632351-18-9P	632351-19-0P	632351-20-3P	632351-21-4P	632351-22-5P
	632351-23-6P	632351-24-7P	632351-25-8P	632351-26-9P	632351-27-0P
	632351-28-1P	632351-29-2P	632351-30-5P	632351-31-6P	632351-32-7P
	632351-33-8P	632351-34-9P	632351-35-0P	632351-36-1P	632351-37-2P

for Connie

632351-38-3P	632351-39-4P	632351-40-7P	632351-42-9P	632351-44-1P
632351-45-2P	632351-46-3P	632351-47-4P	632351-49-6P	632351-50-9P
632351-52-1P	632351-53-2P	632351-55-4P	632351-56-5P	632351-57-6P
632351-59-8P	632351-61-2P	632351-62-3P	632351-63-4P	632351-64-5P
632351-65-6P	632351-67-8P	632351-68-9P	632351-69-0P	632351-70-3P
632351-71-4P	632351-75-8P	632351-76-9P	632351-77-0P	632351-78-1P
632351-79-2P	632351-80-5P	632351-81-6P	632351-82-7P	632351-83-8P
632351-85-0P	632351-86-1P	632351-87-2P	632351-88-3P	632351-89-4P
632351-90-7P	632351-91-8P	632351-92-9P	632351-93-0P	632351-94-1P
632351-95-2P	632351-96-3P	632351-97-4P	632351-98-5P	632351-99-6P
632352-00-2P	632352-01-3P	632352-02-4P	632352-03-5P	632352-04-6P
632352-05-7P	632352-06-8P	632352-07-9P	632352-08-0P	632352-09-1P
632352-10-4P	632352-11-5P	632352-12-6P	632352-13-7P	632352-14-8P
632352-15-9P	632352-16-0P	632352-17-1P	632352-18-2P	632352-19-3P
632352-20-6P	632352-21-7P	632352-22-8P	632352-23-9P	632352-24-0P
632352-25-1P	632352-26-2P	632352-27-3P	632352-28-4P	632352-29-5P
632352-30-8P	632352-31-9P	632352-32-0P	632352-33-1P	632352-37-5P
632352-38-6P	632352-39-7P	632352-40-0P	632352-41-1P	

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of piperidine derivs. as tachykinin receptor antagonists)

IT	632352-42-2P	632352-43-3P	632352-44-4P	632352-45-5P	632352-46-6P
	632352-47-7P	913092-57-6P	913092-58-7P	913092-59-8P	913092-60-1P
	913092-61-2P	913092-62-3P	913092-63-4P	913092-65-6P	913092-68-9P
	913092-70-3P	913976-54-2P	913976-55-3P	913976-56-4P	913976-57-5P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of piperidine derivs. as tachykinin receptor antagonists)

IT	64-04-0, Phenethylamine	64-19-7, Acetic acid, reactions	74-88-4, Methyl iodide, reactions	75-36-5, Acetyl chloride	79-04-9, Chloroacetyl chloride	79-09-4, Propionic acid, reactions	79-22-1, Chloroformic acid methyl ester	79-44-7, N,N-Dimethylcarbamic acid chloride	91-01-0, Benzhydrol	94-53-1, Piperonylic acid	98-88-4, Benzoyl chloride	100-39-0, Benzyl bromide	100-51-6, Benzyl alcohol, reactions	100-97-0, Hexamethylenetetramine, reactions	101-97-3, Phenylacetic acid ethyl ester	103-71-9, Phenylisocyanate, reactions	105-36-2, Bromoacetic acid ethyl ester	107-10-8, Propylamine, reactions	107-11-9, Allylamine	108-86-1, Bromobenzene, reactions	109-09-1, 2-Chloropyridine	109-90-0, Ethylisocyanate	123-38-6, Propionaldehyde, reactions	124-63-0, Methylsulfonyl chloride	135-02-4, o-Anisaldehyde	402-49-3, 4-(Trifluoromethyl)benzyl bromide	407-25-0, Trifluoroacetic acid anhydride	452-63-1, 4-Fluoro-2-methyl-1-bromobenzene	460-00-4, 4-Fluorobromobenzene	530-62-1, N,N'-Carbonyldiimidazole	543-24-8, N-Acetyl glycine	556-61-6, Methylisothiocyanate	590-17-0, Bromoacetonitrile	612-16-8, 2-Methoxybenzyl alcohol	624-83-9, Methylisocyanate	625-45-6, Methoxyacetic acid	683-57-8, Bromoacetamide	725-89-3, 3,5-Bis(trifluoromethyl)benzoic acid	753-90-2, 2,2,2-Trifluoroethylamine	1939-99-7, $\alpha$ -Toluenesulfonylchloride	2450-71-7, Propargylamine	2491-06-7, N,N-Dimethylglycine hydrochloride	2491-15-8, N-Formylglycine	2627-86-3, (S)-1-Phenylethylamine	2949-22-6, Isocyanatoacetic acid ethyl ester	2999-46-4, Ethylisocyanacetate	3251-69-2, 4-Imidazoleacetic acid hydrochloride	3886-69-9, (R)-1-Phenylethylamine	3886-70-2, (R)-1-Naphthylethylamine	4187-38-6, (R)-4-Tolylethylamine	4244-84-2, 4530-20-5, Boc-glycine	4637-24-5, Dimethylformamide dimethylacetal	5470-11-1, 6638-79-5, N,O-Dimethylhydroxylamine hydrochloride	7693-46-1, Chloroformic acid 4-nitrophenyl ester	13750-81-7, 1-Methyl-1H-imidazole-2-carboxaldehyde	13889-98-0, 1-Acetyl piperazine
----	-------------------------	---------------------------------	-----------------------------------	--------------------------	--------------------------------	------------------------------------	---	---	---------------------	---------------------------	---------------------------	--------------------------	-------------------------------------	---	---	---------------------------------------	--	----------------------------------	----------------------	-----------------------------------	----------------------------	---------------------------	--------------------------------------	-----------------------------------	--------------------------	---	--	--	--------------------------------	------------------------------------	----------------------------	--------------------------------	-----------------------------	-----------------------------------	----------------------------	------------------------------	--------------------------	--	-------------------------------------	--	---------------------------	--	----------------------------	-----------------------------------	--	--------------------------------	---	-----------------------------------	-------------------------------------	----------------------------------	-----------------------------------	---	---	--	--	---------------------------------

13939-69-0, 1-Piperidinecarbonyl chloride 15285-15-1,  
 5-Chloro-3-methyl-1,2,4-triazole 15674-67-6, 3-Diethylaminopropionic  
 acid hydrochloride 16179-97-8 24424-99-5, Di-tert-butyl  
 dicarbonate 25016-01-7, 5-Bromo-2-methoxybenzaldehyde 25503-90-6,  
 1-Acetylpiperidine-4-carboxylic acid 26371-07-3, 1-Piperidinepropionic  
 acid 32161-06-1, 1-Acetyl-4-piperidinone 32247-96-4,  
 3,5-Bis(trifluoromethyl)benzyl bromide 33524-31-1, 2,5-Dimethoxybenzyl  
 alcohol 42933-43-7, 2,3-Dihydro-1-benzofuran-5-amine 58936-19-9  
 63327-49-1, (Acetylamino)(hydroxy)acetic acid 76041-06-0,  
 3-[(3-Ethoxy-3-oxopropyl)amino]-2-phenylpropanoic acid ethyl ester  
 76393-16-3, Ethyl 2-isocyanatobenzoate 79099-07-3, 4-Oxo-1-  
 piperidinecarboxylic acid tert-butyl ester 84358-13-4 98977-34-5  
 159689-88-0, 3-(Trifluoromethoxy)benzyl bromide 168267-01-4,  
 2-Hydroxy-5-[5-(trifluoromethyl)-1H-tetrazol-1-yl]benzaldehyde  
 168267-11-6, 2-Methoxy-5-(5-(trifluoromethyl)-1H-tetrazol-1-  
 yl)benzaldehyde 225246-36-6, 2-(Cyclopropyloxy)-5-[5-(trifluoromethyl)-  
 1H-tetrazol-1-yl]benzaldehyde 239087-09-3, 3-Fluoro-5-  
 (trifluoromethyl)benzyl bromide 252742-72-6, 5-(Chloromethyl)-2,4-  
 dihydro-3H-1,2,4-triazol-3-one 304457-86-1, 1-(1H-Imidazol-4-yl)-1-  
 propanone 632353-50-5, Methanesulfonic acid 3-nitro-5-  
 (trifluoromethyl)benzyl ester 632353-52-7, cis-4-Amino-3-[bis(4-  
 fluorophenyl)methyl]-1-piperidinecarboxylic acid tert-butyl ester  
 880135-38-6, (3R,4S)-4-Amino-3-phenylpiperidine-1-carboxylic  
 acid tert-butyl ester 913092-28-1 913252-06-9, (3S,4R)-4-Amino-3-  
 phenylpiperidine-1-carboxylic acid tert-butyl ester  
 RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of piperidine derivs. as tachykinin receptor antagonists)  
 IT 5779-95-3P, 3,5-Dimethylbenzaldehyde 76041-09-3P, 3-Phenyl-4-piperidone  
 183808-94-8P, 2-Ethoxy-5-[5-(trifluoromethyl)-1H-tetrazol-1-  
 yl]benzaldehyde 193274-82-7P, 3-Benzyl-4-oxopiperidine-1-carboxylic acid  
 tert-butyl ester 219324-21-7P 444288-42-0P 446302-83-6P,  
 1-Benzyl-3-phenyl-4-piperidinone 562837-80-3P, 1-Acetyl-3-benzhydryl-4-  
 piperidinone 562837-99-4P 632352-53-5P 632352-54-6P,  
 3-[Benzyl(3-ethoxy-3-oxopropyl)amino]-2-phenylpropanoic acid ethyl ester  
 632352-55-7P, 1-Benzyl-4-hydroxy-5-phenyl-1,2,5,6-tetrahydro-3-  
 pyridinecarboxylic acid ethyl ester 632352-56-8P, 4-Oxo-3-  
 phenylpiperidine-1-carboxylic acid tert-butyl ester 632352-57-9P,  
 4-Hydroxy-3-phenylpiperidine-1-carboxylic acid tert-butyl ester  
 632352-58-0P, cis-4-[(2-Methoxybenzyl)amino]-3-phenylpiperidine-1-  
 carboxylic acid tert-butyl ester 632352-60-4P, 4-Amino-3-  
 phenylpiperidine-1-carboxylic acid tert-butyl ester 632352-61-5P,  
 cis-3-Benzhydryl-4-[[3,5-bis(trifluoromethyl)benzyl]oxy]piperidine-1-  
 carboxylic acid tert-butyl ester 632352-62-6P, 3-Benzhydryl-4-  
 oxopiperidine-1-carboxylic acid tert-butyl ester 632352-63-7P,  
 3-Benzhydryl-4-hydroxypiperidine-1-carboxylic acid tert-butyl ester  
 632352-64-8P, cis-3-Benzhydryl-4-[[3-fluoro-5-  
 (trifluoromethyl)benzyl]oxy]piperidine-1-carboxylic acid tert-butyl ester  
 632352-65-9P, cis-3-Benzhydryl-4-[[3-(trifluoromethoxy)benzyl]oxy]piperidi  
 ne-1-carboxylic acid tert-butyl ester 632352-66-0P, cis-3-Benzhydryl-4-  
 [[4-(trifluoromethyl)benzyl]oxy]piperidine-1-carboxylic acid tert-butyl  
 ester 632352-67-1P, 5-[5-(Trifluoromethyl)-1H-tetrazol-1-yl]-2,3-dihydro-  
 1-benzofuran-7-carboxaldehyde 632352-68-2P, N-(2,3-Dihydro-benzofuran-5-  
 yl)-2,2,2-trifluoro-acetamide 632352-69-3P 632352-70-6P 632352-71-7P  
 632352-72-8P 632352-73-9P 632352-74-0P, 3-(4-Fluorophenyl)-4-oxo-1-  
 piperidinecarboxylic acid tert-butyl ester 632352-75-1P,  
 cis-3-(4-Fluorophenyl)-4-hydroxy-1-piperidinecarboxylic acid tert-butyl  
 ester 632352-76-2P 632352-77-3P 632352-78-4P 632352-79-5P  
 632352-80-8P 632352-81-9P 632352-82-0P 632352-83-1P 632352-84-2P  
 632352-85-3P 632352-86-4P 632352-87-5P 632352-88-6P 632352-89-7P  
 632352-90-0P 632352-91-1P 632352-92-2P 632352-93-3P 632352-94-4P

632352-95-5P 632352-96-6P 632352-97-7P 632352-98-8P 632352-99-9P  
 632353-00-5P 632353-01-6P 632353-02-7P, cis-4-[[2-Methoxy-5-[5-(trifluoromethyl)-1H-tetrazol-1-yl]benzyl]amino]-3-phenyl-1-piperidinecarboxylic acid tert-butyl ester 632353-03-8P 632353-04-9P  
 632353-05-0P 632353-06-1P 632353-07-2P 632353-08-3P 632353-09-4P  
 632353-10-7P, cis-3-Phenyl-4-[[[5-[5-(trifluoromethyl)-1H-tetrazol-1-yl]-2,3-dihydro-1-benzofuran-7-yl]methyl]amino]-1-piperidinecarboxylic acid tert-butyl ester 632353-11-8P 632353-13-0P 632353-15-2P  
 632353-17-4P, cis-3-Benzyl-4-[[3,5-bis(trifluoromethyl)benzyl]oxy]piperidine-1-carboxylic acid tert-butyl ester 632353-21-0P, cis-3-Benzyl-4-hydroxypiperidine-1-carboxylic acid tert-butyl ester 632353-23-2P  
 632353-26-5P 632353-28-7P, cis-tert-Butyl 4-amino-3-phenylpiperidine-1-carboxylate 632353-30-1P, cis-4-[[4-[[3,5-Bis(trifluoromethyl)benzyl]oxy]-3-phenyl-1-piperidinyl]carbonyl]-1-piperidinecarboxylic acid tert-butyl ester 632353-32-3P, cis-4-[[3,5-Bis(trifluoromethyl)benzyl]oxy]-3-phenyl-1-(4-piperidinylcarbonyl)piperidine hydrochloride 632353-34-5P, (3R,4S)-4-Hydroxy-3-phenyl-1-piperidinecarboxylic acid tert-butyl ester 632353-36-7P, (3R,4S)-4-[[3,5-Bis(trifluoromethyl)benzyl]oxy]-3-phenylpiperidine hydrochloride 632353-39-0P 632353-41-4P  
 632353-42-5P, cis-4-[[[(Benzyloxy)carbonyl]amino]-3-[bis(4-fluorophenyl)methyl]-1-piperidinecarboxylic acid tert-butyl ester 632353-43-6P 632353-44-7P 632353-45-8P, cis-4-Amino-3-[bis(4-fluorophenyl)methyl]-N-ethyl-1-piperidinecarboxamide hydrochloride 632353-46-9P 632353-47-0P 632353-48-1P, N-Ethyl-4-oxo-3-phenylpiperidine-1-carboxamide 910875-38-6P 910875-39-7P, 3-Phenylpiperidin-4-one hydrochloride 913092-27-0P 913092-29-2P  
 913092-30-5P 913092-31-6P 913092-32-7P 913092-33-8P 913092-34-9P  
 913092-35-0P 913092-36-1P 913092-37-2P 913092-38-3P 913092-39-4P  
 913092-40-7P 913092-41-8P 913092-42-9P 913092-43-0P 913092-44-1P  
 913092-45-2P 913092-46-3P 913092-47-4P 913092-48-5P 913092-49-6P  
 913092-50-9P 913092-75-8P 913092-76-9P 913092-77-0P 913092-78-1P  
 913976-51-9P, 4-Amino-N-ethyl-3-phenylpiperidine-1-carboxamide  
 913976-58-6P 913976-59-7P 913976-62-2P 913976-63-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of piperidine derivs. as tachykinin receptor antagonists)

RE.CNT 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Cima Labs Inc; WO 199846215 A1 2001
- (2) Cima Labs Inc; JP 2001524956 A 2001
- (3) Cima Labs Inc; US 6221392 B1 2001 CAPLUS
- (4) Cima Labs Inc; AU 726336 B 2001 CAPLUS
- (5) Cima Labs Inc; EP 975336 A1 2001 CAPLUS
- (6) Merck Sharp & Dohme Ltd; JP 08-506823 A 1996
- (7) Merck Sharp & Dohme Ltd; WO 199419323 A1 1996
- (8) Merck Sharp & Dohme Ltd; US 5633266 A 1996 CAPLUS
- (9) Merck Sharp & Dohme Ltd; AU 679207 B 1996 CAPLUS
- (10) Merck Sharp & Dohme Ltd; EP 683767 B1 1996 CAPLUS
- (11) Pfizer Products Inc; WO 2005110987 A1 2005 CAPLUS
- (12) Pfizer Products Inc; US 2005256164 A1 2005
- (13) Shionogi & Co Ltd; TW 200306868 A 2003
- (14) Shionogi & Co Ltd; WO 2003097102 A1 2003
- (15) Shionogi & Co Ltd; AU 2003235395 A1 2003 CAPLUS
- (16) Takeda Chemical Industries Ltd; EP 1553084 A1 2003 CAPLUS
- (17) Takeda Chemical Industries Ltd; CN 1671662 A 2003 CAPLUS
- (18) Takeda Chemical Industries Ltd; WO 2003101964 A1 2003
- (19) Takeda Chemical Industries Ltd; BR 200311425 A 2003
- (20) Takeda Chemical Industries Ltd; AU 2003241903 A1 2003 CAPLUS
- (21) Takeda Chemical Industries Ltd; NO 200405701 A 2003
- (22) Takeda Chemical Industries Ltd; JP 2004285038 A 2003 CAPLUS

for Connie

11/245136

(23) Takeda Chemical Industries Ltd; KR 2005010018 A 2003  
(24) Takeda Chemical Industries Ltd; WO 2006030975 A1 2006 CAPLUS  
(25) Yamanouchi Pharmaceutical Co Ltd; EP 1413294 A1 2003 CAPLUS  
(26) Yamanouchi Pharmaceutical Co Ltd; CN 1473035 A 2003  
(27) Yamanouchi Pharmaceutical Co Ltd; BR 200205509 A 2003  
(28) Yamanouchi Pharmaceutical Co Ltd; AU 2002355222 A1 2003 CAPLUS  
(29) Yamanouchi Pharmaceutical Co Ltd; MX 2003000985 A1 2003  
(30) Yamanouchi Pharmaceutical Co Ltd; ZA 200300647 A 2003  
(31) Yamanouchi Pharmaceutical Co Ltd; WO 2003009831 A1 2003  
(32) Yamanouchi Pharmaceutical Co Ltd; HU 200302351 A2 2003  
(33) Yamanouchi Pharmaceutical Co Ltd; KR 2003036656 A 2003  
(34) Yamanouchi Pharmaceutical Co Ltd; US 2003147948 A1 2003 CAPLUS  
(35) Yamanouchi Pharmaceutical Co Ltd; TW 200412245 A 2003  
(36) Yamanouchi Pharmaceutical Co Ltd; JP 2004196829 A 2003 CAPLUS

L16 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2005:696924 CAPLUS

DN 143:194181

ED Entered STN: 05 Aug 2005

TI Preparation of novel aminoglycoside antibiotics effective against  
methicillin resistant Staphylococcus aureus (MRSA)

IN Minowa, Nobuto; Usui, Takayuki; Akiyama, Yoshihisa; Hiraiwa, Yukiko;  
Yoneda, Toshio; Hasegawa, Toshifumi; Maebashi, Kazunori; Ida, Takashi;  
Katsumata, Kazuko; Otsuka, Keiko; Ikeda, Daishiro

PA Meiji Seika Kaisha, Ltd., Japan; Microbial Chemistry Research Foundation

SO PCT Int. Appl., 198 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

IC ICM C07H015-234

ICS A61K031-7036; A61D031-04

CC 33-7 (Carbohydrates)

Section cross-reference(s): 1

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005070945	A1	20050804	WO 2005-JP767	20050121
	WO 2005070945	A8	20051215		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW, SM			
	RW:	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	EP 1710248	A1	20061011	EP 2005-703988	20050121
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK, IS			
PRAI	JP 2004-13642	A	20040121		
	WO 2005-JP767	W	20050121		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2005070945	ICM	C07H015-234
	ICS	A61K031-7036; A61D031-04
	IPCI	C07H0015-234 [ICM,7]; C07H0015-00 [ICM,7,C*];

for Connie

A61K0031-7036 [ICS,7]; A61K0031-7028 [ICS,7,C\*];  
 A61D0031-04 [ICS,7]; A61P0031-04 [ICS,7]; A61P0031-00  
 [ICS,7,C\*]  
 IPCR A61K0031-7028 [I,C\*]; A61K0031-7036 [I,A]; C07H0015-00  
 [I,C\*]; C07H0015-234 [I,A]  
 ECLA A61K031/7036; C07H015/234  
 EP 1710248 IPCI C07H0015-00 [ICM,7]  
 IPCR C07H0015-00 [I,C]; C07H0015-234 [I,A]; A61K0031-7028  
 [I,C\*]; A61K0031-7036 [I,A]  
 ECLA A61K031/7036; C07H015/234  
 OS MARPAT 143:194181  
 GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB Arbekacin, 3',4'-dehydroarbekacin, dibekacin, 3',4'-dehydrodibekacin, epiarbekacin, and epidibekacin compds. represented by, e.g., the general formula (I) or pharmacol. acceptable salts or solvates thereof [R4''a, R4''b = H, OH; R5a = halo, HO, NH<sub>2</sub>, N<sub>3</sub>, C1-6 alkanoyloxy, C1-6 alkylsulfonyloxy, C1-6 alkanoylamino, arylcarbonylamino, di(C1-6 alkyl)amino, (un)substituted C1-6 alkylamino; R6''a = C1-6 alkyl with ≥1 H atoms optionally being substituted with HO, halo, and NH<sub>2</sub>; R3''a, R6'a, R6'b = H, C1-6 alkyl; the dotted line is a double or a single bond; m = 0-2; X = H, OH; n = 1-3; \* represents R or S configuration; provided that when R4''a = H, R4''b = OH, and the dotted line is a single bond, then R5a = a group described above other than F; or when R3''a = R4''a = H, R6a = hydroxymethyl, R6'a = R6'b = H, and the dotted line = a single bond, then R5a = a described above other than HO, NH<sub>2</sub>, and N<sub>3</sub>] are prepared These compds. have excellent antibacterial activity against bacteria causing severe infectious diseases such as pneumonia and sepsis, in particular against MRSA. Also provided are: an antibacterial containing any of these compds.; and a medicinal composition containing any of these compds.

as an active ingredient. Thus, N-protection of arbekacin by reaction with di-tert-Bu dicarbonate in DMF followed by 4'',6''-O-protection by ketalization with 1,1-dimethoxycyclohexane in the presence of p-MeC<sub>6</sub>H<sub>4</sub>SO<sub>3</sub>H.H<sub>2</sub>O in DMF at 50° and 46-48 mm bar, and O-benzoylation by benzoyl chloride in pyridine at 4-6° for 2 h gave arbekacin derivative (II) which underwent 5-O-mesylation by mesyl chloride in the presence of 4-dimethylaminopyridine in CH<sub>2</sub>Cl<sub>2</sub> at room temperature for 4 h and 5-acetoxylation with cesium acetate in DMF at 100° for 2 h to give 5-epiarbekacin derivative (III). Deketalization of III with 90% aqueous CF<sub>3</sub>CO<sub>2</sub>H at room temperature for 4 h, 6''-O-tritylation with trityl chloride in pyridine at 60° for 1 h, 4''-O-triflation with triflic anhydride in the presence of pyridine in CH<sub>2</sub>Cl<sub>2</sub> at -5° for 2 h, and 4''-O-acetoxylation with cesium acetate in DMF at room temperature for 2 h followed by O-deacylation with NaOMe in methanol and then treatment with 90% aqueous CF<sub>3</sub>CO<sub>2</sub>H gave 5,4''-diepiarbekacin. The compds. I showed min. inhibitory concentration (MIC) of ≤8, ≤4, and ≤4 µg/mL against MRSA-HR, MRSA-LR, and Pseudomonas aeruginosa PAO1, resp., while arbekacin showed MIC of 64 and 16 µg/mL against MRSA-HR and MRSA-Laser Radiation, resp.

ST aminoglycoside antibiotic prepn antibacterial methicillin resistant Staphylococcus aureus MRSA; arbekacin dehydroarbekacin prepn antibacterial methicillin resistant Staphylococcus aureus; dibekacin dehydrodibekacin prepn antibacterial methicillin resistant Staphylococcus aureus; epiarbekacin epidibekacin prepn antibacterial methicillin resistant

11/245136

Staphylococcus aureus  
IT Antibiotics  
(aminoglycoside; preparation of aminoglycoside antibiotics effective as antibacterial agents against methicillin resistant Staphylococcus aureus (MRSA))  
IT Infection  
(bacterial; preparation of aminoglycoside antibiotics effective as antibacterial agents against methicillin resistant Staphylococcus aureus (MRSA))  
IT Staphylococcus aureus  
(methicillin-resistant; preparation of aminoglycoside antibiotics effective as antibacterial agents against methicillin resistant Staphylococcus aureus (MRSA))  
IT Antibacterial agents  
(preparation of aminoglycoside antibiotics effective as antibacterial agents against methicillin resistant Staphylococcus aureus (MRSA))  
IT Aminoglycosides  
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(preparation of aminoglycoside antibiotics effective as antibacterial agents against methicillin resistant Staphylococcus aureus (MRSA))  
IT 861404-85-5P  
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
(preparation of aminoglycoside antibiotics effective as antibacterial agents against methicillin resistant Staphylococcus aureus (MRSA))  
IT 157318-53-1P 861399-75-9P 861399-76-0P 861399-77-1P 861399-78-2P  
861399-79-3P 861399-80-6P 861399-81-7P 861399-82-8P 861399-83-9P  
861399-84-0P 861399-85-1P 861399-87-3P 861399-88-4P 861399-89-5P  
861399-90-8P 861399-91-9P 861399-92-0P 861399-93-1P 861399-94-2P  
861399-95-3P 861399-96-4P 861399-97-5P 861399-98-6P 861399-99-7P  
861400-00-2P 861400-01-3P 861400-02-4P 861400-03-5P 861400-04-6P  
861400-05-7P 861400-06-8P 861400-07-9P 861400-08-0P 861400-09-1P  
861400-10-4P 861400-11-5P 861400-12-6P 861400-13-7P 861400-14-8P  
861400-15-9P 861400-16-0P 861400-17-1P 861400-18-2P 861400-19-3P  
861400-20-6P 861400-21-7P 861400-22-8P 861400-23-9P 861400-24-0P  
861400-25-1P 861400-26-2P 861400-27-3P 861400-28-4P 861400-29-5P  
861400-30-8P 861400-31-9P 861400-32-0P 861400-33-1P 861400-34-2P  
861400-35-3P 861400-36-4P 861400-37-5P 861400-38-6P 861400-40-0P  
861400-41-1P 861400-42-2P 861400-43-3P 861400-45-5P 861400-46-6P  
861400-47-7P 861404-84-4P 861675-30-1P 861675-31-2P 861675-32-3P  
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(preparation of aminoglycoside antibiotics effective as antibacterial agents against methicillin resistant Staphylococcus aureus (MRSA))  
IT 50-00-0, Formaldehyde, reactions 74-89-5, Methylamine, reactions  
75-07-0, Acetaldehyde, reactions 75-52-5, Nitromethane, reactions  
76-83-5, Triphenylmethyl chloride 77-76-9, 2,2-Dimethoxypropane  
90-02-8, 2-Hydroxybenzaldehyde, reactions 98-88-4, Benzoyl chloride  
100-39-0, Benzyl bromide 100-52-7, Benzaldehyde, reactions 100-83-4, m-Hydroxybenzaldehyde 104-53-0, 3-Phenylpropionaldehyde 107-11-9, Allylamine 107-15-3, Ethylenediamine, reactions 108-24-7, Acetic anhydride 109-76-2, 1,3-Diaminopropane 110-91-8, Morpholine, reactions 123-08-0, p-Hydroxybenzaldehyde 124-63-0, Mesityl chloride 141-43-5, 2-Aminoethanol, reactions 156-87-6, 3-Amino-1-propanol 334-88-3, Diazomethane 534-03-2, 2-Amino-1,3-propanediol 616-29-5, 1,3-Diamino-2-hydroxypropane 925-90-6, Ethylmagnesium bromide

for Connie

11/245136

933-40-4, 1,1-Dimethoxycyclohexane 1125-88-8, Benzaldehyde dimethyl  
acetal 1826-67-1, Vinylmagnesium bromide 3396-11-0, Cesium acetate  
3731-51-9, 2-(Aminomethyl)pyridine 13139-17-8 16694-46-5, Ethyl  
formimidate hydrochloride 24424-99-5, Di-tert-butyl dicarbonate  
26628-22-8, Sodium azide 38078-09-0, Diethylaminosulfur trifluoride  
41840-29-3 42491-79-2 51025-85-5, Arbekacin 57260-73-8,  
N-(tert-Butoxycarbonyl)ethylenediamine 84891-50-9 107819-90-9,  
N,N'-Bis(tert-butoxycarbonyl)-S-methylisothiourea 136159-63-2  
176980-36-2 852311-19-4 861400-69-3 861401-06-1 861401-61-8  
861401-62-9 861401-64-1

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of aminoglycoside antibiotics effectives as antibacterial  
agents against methicillin resistant Staphylococcus aureus (MRSA))

IT	189157-31-1P	189157-32-2P	189157-33-3P	861400-52-4P	861400-53-5P
	861400-54-6P	861400-55-7P	861400-56-8P	861400-57-9P	861400-58-0P
	861400-59-1P	861400-60-4P	861400-61-5P	861400-62-6P	861400-63-7P
	861400-64-8P	861400-65-9P	861400-66-0P	861400-67-1P	861400-68-2P
	861400-70-6P	861400-71-7P	861400-72-8P	861400-73-9P	861400-76-2P
	861400-79-5P	861400-82-0P	861400-85-3P	861400-89-7P	861400-93-3P
	861400-97-7P	861401-03-8P	861401-08-3P	861401-10-7P	861401-11-8P
	861401-12-9P	861401-13-0P	861401-14-1P	861401-15-2P	861401-16-3P
	861401-17-4P	861401-18-5P	861401-19-6P	861401-20-9P	861401-21-0P
	861401-22-1P	861401-23-2P	861401-24-3P	861401-25-4P	861401-26-5P
	861401-27-6P	861401-28-7P	861401-29-8P	861401-30-1P	861401-31-2P
	861401-32-3P	861401-33-4P	861401-34-5P	861401-35-6P	861401-36-7P
	861401-37-8P	861401-38-9P	861401-39-0P	861401-40-3P	861401-41-4P
	861401-42-5P	861401-43-6P	861401-44-7P	861401-45-8P	861401-46-9P
	861401-47-0P	861401-48-1P	861401-49-2P	861401-50-5P	861401-51-6P
	861401-52-7P	861401-53-8P	861401-54-9P	861401-55-0P	861401-56-1P
	861401-57-2P	861401-58-3P	861401-59-4P	861401-60-7P	861401-63-0P
	861401-65-2P	861401-66-3P	861401-67-4P	861401-68-5P	861401-69-6P
	861401-70-9P	861401-71-0P	861401-72-1P	861401-73-2P	861401-74-3P
	861401-75-4P	861401-76-5P	861401-77-6P	861401-78-7P	861401-79-8P
	861401-80-1P	861401-81-2P	861404-86-6P	861404-87-7P	

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)

(preparation of aminoglycoside antibiotics effectives as antibacterial,  
agents against methicillin resistant Staphylococcus aureus (MRSA))

RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Scherico Ltd; GB 1528930 A 1977 CAPLUS
- (2) Scherico Ltd; US 4000261 A 1977 CAPLUS
- (3) Scherico Ltd; JP 52-244 A 1977 CAPLUS
- (4) Shitara, T; Carbohydrate Research 1995, V276, P75 CAPLUS
- (5) Umezawa, H; J Antibiotics 1975, V28, P340 CAPLUS
- (6) Zaidan Hojin Biseibutsu Kagaku Kenkyukai; JP 3215759 B2 2001 CAPLUS
- (7) Zaidan Hojin Biseibutsu Kagaku Kenkyukai; US 5488038 A 2001 CAPLUS
- (8) Zaidan Hojin Biseibutsu Kagaku Kenkyukai; EP 601909 A2 2001 CAPLUS

L16 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2003:243023 CAPLUS

DN 139:96917

ED Entered STN: 30 Mar 2003

TI Structural regulation of a peptide-conjugated graft copolymer: A simple  
model for amyloid formation

AU Koga, Tomoyuki; Taguchi, Kazuhiro; Kobuke, Yoshiaki; Kinoshita, Takatoshi;  
Higuchi, Masahiro

CS Nanoarchitectonics Research Center, National Institute of Advanced  
Industrial Science and Technology and CREST (Japan Science and  
Technology), Ibaraki, 305-8565, Japan

for Connie



SO Chemistry--A European Journal (2003), 9(5), 1146-1156

CODEN: CEUJED; ISSN: 0947-6539

PB Wiley-VCH Verlag GmbH & Co. KGaA

DT Journal

LA English

CC 6-3 (General Biochemistry)

OS CASREACT 139:96917

AB The self-assembly of peptides and proteins into  $\beta$ -sheet-rich high-order structures has attracted much attention as a result of the characteristic nanostructure of these assemblies and because of their association with neurodegenerative diseases. Here we report the structural and conformational properties of a peptide-conjugated graft copolymer, poly( $\gamma$ -methyl-L-glutamate) grafted polyallylamine (1) in a water-2,2,2-trifluoroethanol solution as a simple model for amyloid formation. Atomic force microscopy revealed that the globular peptide 1 self-assembles into nonbranching fibrils that are about 4 nm in height under certain conditions. These fibrils are rich in  $\beta$ -sheets and, similar to authentic amyloid fibrils, bind the amyloidophilic dye Congo red. The secondary and quaternary structures of the peptide 1 can be controlled by manipulating the pH, solution composition, and salt concentration; this

indicates that the three-dimensional packing arrangement of peptide chains is the key factor for such fibril formation. Furthermore, the addition of carboxylic acid-terminated poly(ethylene glycol), which interacts with both of amino groups of 1 and hydrophobic PMLG chains, was found to obviously inhibit the  $\alpha$ -to- $\beta$  structural transition for non-assembled peptide 1 and to partially cause a  $\beta$ -to- $\alpha$  structural transition against the 1-assembly in the  $\beta$ -sheet form. These findings demonstrate that the amyloid fibril formation is not restricted to specific protein sequences but rather is a generic property of peptides. The ability to control the assembled structure of the peptide should provide useful information not only for understanding the amyloid fibril formation, but also for developing novel peptide-based material with well-defined nanostructures.

ST peptide conjugated graft copolymer amyloid fibril model

IT Fibril

(amyloid-like; peptide-conjugated graft copolymer as a simple model for amyloid fibril formation)

IT Organelle

(fibril, amyloid-like; peptide-conjugated graft copolymer as a simple model for amyloid fibril formation)

IT Polymers, biological studies

RL: BSU (Biological study, unclassified); BIOL (Biological study)

(graft; peptide-conjugated graft copolymer as a simple model for amyloid fibril formation)

IT Self-assembly

(into amyloid-like fibrils; peptide-conjugated graft copolymer as a simple model for amyloid fibril formation)

IT Conformation

$\beta$ -Sheet

(peptide-conjugated graft copolymer as a simple model for amyloid fibril formation)

IT Amyloid

RL: BSU (Biological study, unclassified); BIOL (Biological study)

(peptide-conjugated graft copolymer as a simple model for amyloid fibril formation)

IT 36877-69-7DP, reaction products with allylamine-Me glutamate graft copolymer/nitrobenzofurazan derivs.

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP

(Preparation); USES (Uses)

(Rhodamine B-containing peptide-conjugated graft copolymer;  
peptide-conjugated graft copolymer as a simple model for amyloid fibril  
formation)

IT 29270-56-2DP, reaction products with allylamine-Me glutamate  
graft copolymer

RL: BSU (Biological study, unclassified); BUU (Biological use,  
unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP  
(Preparation); USES (Uses)

(nitrobenzofurazan-containing peptide-conjugated graft copolymer;  
peptide-conjugated graft copolymer as a simple model for amyloid fibril  
formation)

IT 1663-47-4,  $\gamma$ -Methyl-L-glutamate-N-carboxy anhydride  
24424-99-5, Di-tert-butyl dicarbonate 29270-56-2,  
4-Fluoro-7-nitrobenzofurazan 30551-89-4, Polyallylamine 36877-69-7,  
Rhodamine B isothiocyanate

RL: RCT (Reactant); RACT (Reactant or reagent)

(peptide-conjugated graft copolymer as a simple model for amyloid  
fibril formation)

IT 431047-85-7DP, BOC-protected, benzofurazan derivs., reaction products with  
Rhodamine B isothiocyanate

RL: BSU (Biological study, unclassified); BUU (Biological use,  
unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP  
(Preparation); USES (Uses)

(peptide-conjugated graft copolymer; peptide-conjugated graft copolymer  
as a simple model for amyloid fibril formation)

RE.CNT 61 THERE ARE 61 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Blow, D; Protein Sci 1994, V3, P1638 CAPLUS
- (2) Cammers-Goodwin, A; J Am Chem Soc 1996, V118, P3082 CAPLUS
- (3) Chen, S; Biochemistry 2002, V41, P7391 CAPLUS
- (4) Chiti, F; Proc Natl Acad Sci USA 1999, V96, P3590 CAPLUS
- (5) Chou, P; Biochemistry 1974, V13, P222 CAPLUS
- (6) Conio, G; J Biol Chem 1970, V245, P3335 CAPLUS
- (7) Cooper, J; Lab Invest 1974, V31, P232 CAPLUS
- (8) Daly, W; Tetrahedron Lett 1988, V29, P5859 CAPLUS
- (9) Dobson, C; Trends Biochem Sci 1999, V24, P329 CAPLUS
- (10) Fandrich, M; Nature 2001, V410, P165 CAPLUS
- (11) Fezoui, Y; Nat Struct Biol 2000, V7, P1095 CAPLUS
- (12) Ghadiri, R; J Am Chem Soc 1992, V114, P825
- (13) Gordon, D; Biochemistry 1972, V11, P413 CAPLUS
- (14) Greenfield, N; Biochemistry 1969, V8, P4108 CAPLUS
- (15) Guijarro, J; Proc Natl Acad Sci USA 1998, V95, P4224 CAPLUS
- (16) Harada, A; Macromolecules 1996, V29, P6183 CAPLUS
- (17) Harper, J; Annu Rev Biochem 1997, V66, P385 CAPLUS
- (18) Harper, J; Biochemistry 1999, V38, P8972 CAPLUS
- (19) Higashi, N; Chem Commun 2000, P361 CAPLUS
- (20) Higashi, N; ChemBioChem 2002, V3, P448 CAPLUS
- (21) Higuchi, M; Langmuir 2000, V16, P7061 CAPLUS
- (22) Hol, W; Nature 1978, V273, P443 CAPLUS
- (23) Howlett, D; Neurodegeneration 1995, V4, P23 MEDLINE
- (24) Jarrett, J; Biochemistry 1992, V31, P12345 CAPLUS
- (25) Kauffmann, E; Proc Natl Acad Sci USA 2001, V98, P6646 CAPLUS
- (26) Kelly, J; Curr Opin Struct Biol 1998, V8, P101 CAPLUS
- (27) Koga, T; Chem Commun 2002, P242 CAPLUS
- (28) Lansbury, P; Proc Natl Acad Sci USA 1999, V96, P3342 CAPLUS
- (29) Lashuel, H; J Am Chem Soc 2000, V122, P5262 CAPLUS
- (30) Lomakin, A; Proc Natl Acad Sci USA 1996, V93, P1125 CAPLUS
- (31) Lorenzo, A; Proc Natl Acad Sci USA 1994, V91, P12243 CAPLUS
- (32) MacPhee, C; J Am Chem Soc 2000, V122, P12707 CAPLUS

for Connie

11/245136

- (33) Martsev, S; Biochemistry 2002, V41, P3389 CAPLUS
- (34) Minor, D; Nature 1994, V371, P264 CAPLUS
- (35) Miyazawa, T; J Am Chem Soc 1961, V83, P712 CAPLUS
- (36) Mutter, M; Angew Chem 1989, V101, P551 CAPLUS
- (37) Mutter, M; Angew Chem Int Ed Engl 1989, V28, P535
- (38) Niwa, M; Langmuir 1999, V15, P5088 CAPLUS
- (39) Pemawansa, K; Macromolecules 1999, V32, P1910 CAPLUS
- (40) Pike, C; J Neurosci 1993, V13, P1676 CAPLUS
- (41) Prusiner, S; Science 1991, V252, P1515 CAPLUS
- (42) Puchtler, H; J Histochem Cytochem 1962, V10, P355 CAPLUS
- (43) Ramirez-Aguilar, K; Langmuir 1998, V14, P2562 CAPLUS
- (44) Rathore, O; J Am Chem Soc 2001, V123, P5231 CAPLUS
- (45) Rochet, J; Curr Opin Struct Biol 2000, V10, P60 CAPLUS
- (46) Sakamoto, S; Chem Commun 2000, P1741
- (47) Sasaki, T; J Am Chem Soc 1989, V111, P380 CAPLUS
- (48) Serpell, L; Biochim Biophys Acta 2000, V1502, P16 CAPLUS
- (49) Sipe, J; Crit Rev Clin Lab Sci 1994, V31, P325 CAPLUS
- (50) Storrs, R; Biochemistry 1992, V32, P1695 CAPLUS
- (51) Sunda, M; Adv Protein Chem 1997, V50, P123
- (52) Takabashi, Y; Chem Eur J 1998, V4, P2475
- (53) Takahashi, Y; ChemBioChem 2002, V3, P637 CAPLUS
- (54) Umemura, J; J Phys Chem 1990, V94, P62 CAPLUS
- (55) Villegas, V; Protein Sci 2000, V9, P1700 CAPLUS
- (56) Wada, A; Adv Biophys 1976, V9, P1 CAPLUS
- (57) Wallimann, P; Angew Chem 1999, V111, P1377
- (58) Wallimann, P; Angew Chem Int Ed 1999, V38, P1290 CAPLUS
- (59) Williams, R; Biochim Biophys Acta 1987, V916, P200 CAPLUS
- (60) Zhang, S; Proc Natl Acad Sci USA 1997, V94, P23 CAPLUS
- (61) Zurdo, J; J Mol Biol 2001, V311, P325 CAPLUS

L16 ANSWER 6 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2002:733860 CAPLUS

DN 137:252674

ED Entered STN: 27 Sep 2002

TI Synthesis of 1,3-diamino-4-(aminomethyl)-benzene derivatives and their use  
in oxidative hair dyes

IN Chassot, Laurent; Braun, Hans-Juergen

PA Wella AG, Germany

SO Ger. Offen., 16 pp.

CODEN: GWXXBX

DT Patent

LA German

IC ICM C07C211-51

ICS C07C215-08; C07C217-00; C07C211-52; C07C211-53; D06P001-32;  
D06P001-645; A61K007-13; C07D207-04; C07D211-06; C07D295-03;  
C07D213-04

CC 62-3 (Essential Oils and Cosmetics)

Section cross-reference(s): 25

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	---	-----	-----	-----
PI	DE 10114084	A1	20020926	DE 2001-10114084	20010322
	CA 2443289	A1	20021003	CA 2001-2443289	20011019
	WO 2002076923	A1	20021003	WO 2001-EP12124	20011019
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				

for Connie

11/245136

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,  
DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,  
BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2002215964	A1	20021008	AU 2002-215964	20011019
BR 2001010957	A	20030408	BR 2001-10957	20011019
EP 1370514	A1	20031217	EP 2001-274020	20011019
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2004518762	T	20040624	JP 2002-576186	20011019
US 2003172471	A1	20030918	US 2002-276567	20021114
US 6936077	B2	20050830		
PRAI DE 2001-10114084	A	20010322		
WO 2001-EP12124	W	20011019		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
DE 10114084	ICM	C07C211-51
	ICS	C07C215-08; C07C217-00; C07C211-52; C07C211-53; D06P001-32; D06P001-645; A61K007-13; C07D207-04; C07D211-06; C07D295-03; C07D213-04
	IPCI	C07C0211-51 [ICM,7]; C07C0215-08 [ICS,7]; C07C0215-00 [ICS,7,C*]; C07C0217-00 [ICS,7]; C07C0211-52 [ICS,7]; C07C0211-53 [ICS,7]; C07C0211-00 [ICS,7,C*]; D06P0001-32 [ICS,7]; D06P0001-00 [ICS,7,C*]; D06P0001-645 [ICS,7]; D06P0001-64 [ICS,7,C*]; A61K0007-13 [ICS,7]; C07D0207-04 [ICS,7]; C07D0207-00 [ICS,7,C*]; C07D0211-06 [ICS,7]; C07D0211-00 [ICS,7,C*]; C07D0295-03 [ICS,7]; C07D0295-00 [ICS,7,C*]; C07D0213-04 [ICS,7]; C07D0213-00 [ICS,7,C*]
	IPCR	C07D0295-12 [I,A]; C07C0211-00 [I,C*]; C07C0211-50 [I,A]; C07C0211-51 [I,A]; C07C0215-00 [I,C*]; C07C0215-14 [I,A]; C07C0217-00 [I,C*]; C07C0217-08 [I,A]; C07C0233-00 [I,C*]; C07C0233-36 [I,A]; C07D0207-00 [I,C*]; C07D0207-08 [I,A]; C07D0207-12 [I,A]; C07D0211-00 [I,C*]; C07D0211-42 [I,A]; C07D0211-46 [I,A]; C07D0295-00 [I,C*]; C07D0295-135 [I,A]; C07D0307-00 [I,C*]; C07D0307-14 [I,A]; D06P0003-04 [I,C*]; D06P0003-08 [I,A]
	ECLA	C07C211/51; C07C215/14; C07C217/08; C07C233/36; C07D211/46; C07D295/12A3
CA 2443289	IPCI	C07C0211-51 [ICM,7]; C07C0211-00 [ICM,7,C*]; A61K0007-13 [ICS,7]
	IPCR	C07D0295-12 [I,A]; C07C0211-00 [I,C*]; C07C0211-50 [I,A]; C07C0211-51 [I,A]; C07C0215-00 [I,C*]; C07C0215-14 [I,A]; C07C0217-00 [I,C*]; C07C0217-08 [I,A]; C07C0233-00 [I,C*]; C07C0233-36 [I,A]; C07D0207-00 [I,C*]; C07D0207-08 [I,A]; C07D0207-12 [I,A]; C07D0211-00 [I,C*]; C07D0211-42 [I,A]; C07D0211-46 [I,A]; C07D0295-00 [I,C*]; C07D0295-135 [I,A]; C07D0307-00 [I,C*]; C07D0307-14 [I,A]; D06P0003-04 [I,C*]; D06P0003-08 [I,A]
WO 2002076923	IPCI	C07C0211-51 [ICM,7]; C07C0211-00 [ICM,7,C*]; A61K0007-13 [ICS,7]
	IPCR	C07D0295-12 [I,A]; C07C0211-00 [I,C*]; C07C0211-50 [I,A]; C07C0211-51 [I,A]; C07C0215-00 [I,C*]; C07C0215-14 [I,A]; C07C0217-00 [I,C*]; C07C0217-08 [I,A]; C07C0233-00 [I,C*]; C07C0233-36 [I,A]; C07D0207-00 [I,C*]; C07D0207-08 [I,A]; C07D0207-12 [I,A]; C07D0211-00 [I,C*]; C07D0211-42 [I,A]; C07D0211-46 [I,A]; C07D0295-00 [I,C*]; C07D0295-135 [I,A]; C07D0307-00 [I,C*]; C07D0307-14 [I,A]; D06P0003-04 [I,C*]; D06P0003-08 [I,A]

for Connie

		[I,A]; C07D0307-00 [I,C*]; C07D0307-14 [I,A]; D06P0003-04 [I,C*]; D06P0003-08 [I,A]
	ECLA	C07C211/51; C07C215/14; C07C217/08; C07C233/36; C07D211/46; C07D295/12A3
AU 2002215964	IPCI	C07C0211-51 [ICM,7]; C07C0211-00 [ICM,7,C*]; A61K0007-13 [ICS,7]
BR 2001010957	IPCI	C07C0211-51 [ICM,7]; C07C0211-00 [ICM,7,C*]; A61K0007-13 [ICS,7]
	IPCR	C07D0295-12 [I,A]; C07C0211-00 [I,C*]; C07C0211-50 [I,A]; C07C0211-51 [I,A]; C07C0215-00 [I,C*]; C07C0215-14 [I,A]; C07C0217-00 [I,C*]; C07C0217-08 [I,A]; C07C0233-00 [I,C*]; C07C0233-36 [I,A]; C07D0207-00 [I,C*]; C07D0207-08 [I,A]; C07D0207-12 [I,A]; C07D0211-00 [I,C*]; C07D0211-42 [I,A]; C07D0211-46 [I,A]; C07D0295-00 [I,C*]; C07D0295-135 [I,A]; C07D0307-00 [I,C*]; C07D0307-14 [I,A]; D06P0003-04 [I,C*]; D06P0003-08 [I,A]
EP 1370514	IPCI	C07C0211-51 [ICM,7]; C07C0211-00 [ICM,7,C*]; A61K0007-13 [ICS,7]
	IPCR	C07D0295-12 [I,A]; C07C0211-00 [I,C*]; C07C0211-50 [I,A]; C07C0211-51 [I,A]; C07C0215-00 [I,C*]; C07C0215-14 [I,A]; C07C0217-00 [I,C*]; C07C0217-08 [I,A]; C07C0233-00 [I,C*]; C07C0233-36 [I,A]; C07D0207-00 [I,C*]; C07D0207-08 [I,A]; C07D0207-12 [I,A]; C07D0211-00 [I,C*]; C07D0211-42 [I,A]; C07D0211-46 [I,A]; C07D0295-00 [I,C*]; C07D0295-135 [I,A]; C07D0307-00 [I,C*]; C07D0307-14 [I,A]; D06P0003-04 [I,C*]; D06P0003-08 [I,A]
JP 2004518762	IPCI	C07C0211-50 [ICM,7]; C07C0211-00 [ICM,7,C*]; C07D0207-08 [ICS,7]; C07D0207-12 [ICS,7]; C07D0207-00 [ICS,7,C*]; C07D0211-42 [ICS,7]; C07D0211-00 [ICS,7,C*]; C07D0295-12 [ICS,7]; C07D0295-00 [ICS,7,C*]; C07D0307-14 [ICS,7]; C07D0307-00 [ICS,7,C*]; D06P0003-08 [ICS,7]; D06P0003-04 [ICS,7,C*]
	IPCR	C07C0211-00 [I,C*]; C07C0211-51 [I,A]; C07C0215-00 [I,C*]; C07C0215-14 [I,A]; C07C0217-00 [I,C*]; C07C0217-08 [I,A]; C07C0233-00 [I,C*]; C07C0233-36 [I,A]; C07D0211-00 [I,C*]; C07D0211-46 [I,A]; C07D0295-00 [I,C*]; C07D0295-135 [I,A]
	FTERM	4C037/CA11; 4C054/AA02; 4C054/BB10; 4C054/CC03; 4C054/DD01; 4C054/EE24; 4C054/FF01; 4C069/AA05; 4C069/AA12; 4C069/BB02; 4C069/BB08; 4C069/BB15; 4C069/BB33; 4C069/BC04; 4H006/AA01; 4H006/AB99; 4H057/AA01; 4H057/BA04; 4H057/BA09; 4H057/BA22; 4H057/DA01; 4H057/DA21; 4H057/HA03
US 2003172471	IPCI	A61K0007-13 [ICM,7]; C07D0207-46 [ICS,7]; C07D0207-00 [ICS,7,C*]; C07D0241-04 [ICS,7]; C07D0241-00 [ICS,7,C*]; C07D0211-26 [ICS,7]; C07D0211-00 [ICS,7,C*]; C07F0007-04 [ICS,7]; C07F0007-00 [ICS,7,C*]
	IPCR	C07D0295-12 [I,A]; C07C0211-00 [I,C*]; C07C0211-50 [I,A]; C07C0211-51 [I,A]; C07C0215-00 [I,C*]; C07C0215-14 [I,A]; C07C0217-00 [I,C*]; C07C0217-08 [I,A]; C07C0233-00 [I,C*]; C07C0233-36 [I,A]; C07D0207-00 [I,C*]; C07D0207-08 [I,A]; C07D0207-12 [I,A]; C07D0211-00 [I,C*]; C07D0211-42 [I,A]; C07D0211-46 [I,A]; C07D0295-00 [I,C*]; C07D0295-135 [I,A]; C07D0307-00 [I,C*]; C07D0307-14 [I,A]; D06P0003-04 [I,C*]; D06P0003-08 [I,A]
	NCL	008/405.000; 544/162.000; 544/402.000; 546/229.000; 548/566.000; 556/413.000; 558/418.000; 564/336.000

ECLA C07C211/51; C07C215/14; C07C217/08; C07C233/36;  
C07D211/46; C07D295/12A3

OS MARPAT 137:252674

AB The invention concerns the synthesis of 1,3-diamino-4-(aminomethyl)-benzene derivates and their use as coupling agents in oxidative hair dyes. The hair preps. further contain developers, other coupling agents and direct dyes. Thus 1,3-diamino-4-(methylaminomethyl)-benzene hydrochloride was synthesized and used as a 1.25 mmol coupler ingredient in a hair dye that contained 1.25 mmol 1,4-diamino benzene as developer. Further ingredients were (g); potassium oleate ( 8% aqueous solution) 1.0; ammonia (22% aqueous solution) 1.0; ethanol 1.0; ascorbic acid 0.3; water to 100.

ST diamino aminomethyl benzene derivate oxidative hair dye

IT Dyes

(direct; synthesis of 1,3-diamino-4-(aminomethyl)-benzene derivates and use in oxidative hair dyes)

IT Hair preparations

(dyes, oxidative; synthesis of 1,3-diamino-4-(aminomethyl)-benzene derivates and use in oxidative hair dyes)

IT 460990-06-1P 460990-07-2P 460990-08-3P 460990-09-4P 460990-10-7P  
460990-11-8P 460990-12-9P 460990-13-0P 460990-14-1P 460990-15-2P  
460990-16-3P 460990-17-4P 460990-18-5P 460990-19-6P 460990-20-9P

RL: COS (Cosmetic use); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)

(coupling agent; synthesis of 1,3-diamino-4-(aminomethyl)-benzene derivates and use in oxidative hair dyes)

IT 83-56-7, 1,5-Dihydroxynaphthalene 89-25-8, 3-Methyl-1-phenyl-5-pyrazolone 89-57-6, 5-Aminosalicylic acid 89-83-8, 5-Methyl-2-(1-methylethyl)phenol 90-15-3, 1-Naphthol 91-56-5, 2,3-Indolinedione 91-68-9, 3-Diethylaminophenol 92-44-4, 2,3-Dihydroxynaphthalene 92-65-9, 4-[Ethyl(2-hydroxyethyl)amino]aniline 93-05-0, 4-Diethylaminoaniline 95-55-6, 2-Aminophenol 95-70-5, 1,4-Diamino-2-methylbenzene 95-88-5, 1-Chloro-2,4-dihydroxybenzene 99-07-0, 3-Dimethylaminophenol 99-98-9, 4-Dimethylaminoaniline 101-54-2, 4-Phenylaminoaniline 106-50-3, 1,4-Diaminobenzene, biological studies 108-45-2, 1,3-Diaminobenzene, biological studies 108-46-3, 1,3-Dihydroxybenzene, biological studies 123-30-8, 4-Aminophenol 137-19-9, 1,5-Dichloro-2,4-dihydroxybenzene 141-86-6, 2,6-Diaminopyridine 150-75-4, 4-Methylaminophenol 399-95-1, 4-Amino-3-fluoro-phenol 399-96-2, 4-Amino-2-fluoro-phenol 533-31-3, 3,4-Methylenedioxyphenol 533-73-3, 1,2,4-Trihydroxybenzene 575-38-2, 1,7-Dihydroxynaphthalene 582-17-2, 2,7-Dihydroxynaphthalene 591-27-5, 3-Aminophenol 608-25-3, 1,3-Dihydroxy-2-methylbenzene 615-66-7, 2-Chloro-1,4-diaminobenzene 619-05-6, 3,4-Diaminobenzoic acid 620-17-7, 770-25-2, 3-[(2-Hydroxyethyl)amino]phenol 1004-74-6, 2,4,5,6-Tetraaminopyrimidine 1004-75-7, 2,5,6-Triamino-4-(1H)-pyrimidone 1630-11-1, 1,4-Diamino-3,5-diethylbenzene 1687-53-2, 5-Amino-2-methoxyphenol 1953-54-4, 5-Hydroxyindole 2359-52-6, 4-[Di(2-hydroxyethyl)amino]-2-methylaniline 2380-84-9, 7-Hydroxyindole 2380-86-1, 6-Hydroxyindole 2380-94-1, 4-Hydroxyindole 2835-95-2, 5-Amino-2-methylphenol 2835-96-3, 4-Amino-2-methylphenol 2835-98-5, 2-Amino-5-methylphenol 2835-99-6, 4-Amino-3-methylphenol 3131-52-0, 5,6-Dihydroxyindole 4318-76-7, 2,5-Diaminopyridine 5306-96-7, 1,4-Diamino-2,3-dimethylbenzene 5349-76-8, 2,4-Diamino-1-methoxy-5-methylbenzene 5697-02-9, 2-Methyl-1-naphthol-acetate 5862-80-6, 4-[(2,3-Dihydroxypropyl)amino]aniline 6201-65-6, 2-Chloro-1,3-dihydroxybenzene 6265-21-0, 3-[(2-Hydroxyethyl)amino]aniline 6393-01-7, 1,4-Diamino-2,5-dimethylbenzene 6941-70-4, 6-Bromo-1-hydroxy-3,4-methylenedioxybenzene 7218-02-2, 1,4-Diamino-2,6-dimethylbenzene 7228-00-4, 2-[(3-

Hydroxyphenyl)amino]acetamide 7469-77-4, 2-Methyl-1-naphthol  
 7575-35-1, 4-[Di(2-hydroxyethyl)amino]aniline 14268-66-7,  
 3,4-Methylenedioxyaniline 16867-03-1, 2-Amino-3-hydroxypyridine  
 17672-22-9, 2-Amino-6-methylphenol 26011-57-4, 6-Amino-3,4-  
 dihydro[1,4](2H)-benzoxazine 26021-57-8, 3,4-Dihydro-6-hydroxy-1,4(2H)-  
 benzoxazine 26455-21-0, N-(3-Dimethylaminophenyl)urea 28020-38-4,  
 2,3-Diamino-6-methoxypyridine 29539-03-5, 5,6-Dihydroxyindoline  
 29785-47-5, 4-Amino-2-(methoxymethyl)phenol 39489-79-7,  
 5-Amino-2,4-dichloro-phenol 45514-38-3, 4,5-Diamino-1-methyl-1H-pyrazole  
 53222-92-7, 3-Amino-2-methylphenol 55302-96-0, 5-[(2-Hydroxyethyl)amino]-  
 2-methylphenol 61693-42-3, 3-Amino-2,4-dichloro-phenol 66566-48-1,  
 4-[(2-Methoxyethyl)amino]aniline 67199-87-5, 1,4-Diamino-2-  
 aminomethylbenzene 70643-19-5, 2,4-Diamino-1-(2-hydroxyethoxy)benzene  
 71077-37-7, 1,3-Diamino-4-(2-methoxyethoxy)benzene 71500-41-9,  
 4-Amino-2-di[(2-hydroxyethyl)amino]-1-ethoxybenzene 71500-42-0,  
 3-[Di(2-hydroxyethyl)amino]aniline 73793-80-3, 1,4-Diamino-2-  
 hydroxymethylbenzene 75513-65-4, 1,3-Diamino-4-(2,3-  
 dihydroxypropoxy)benzene 76045-64-2, 3-[(2-Aminoethyl)amino]aniline  
 78661-33-3, 2-Amino-1-(2-hydroxyethoxy)-4-methylaminobenzene 79352-72-0,  
 4-Amino-2-(aminomethyl)phenol 80592-80-9, 3-[(2,3-Dihydroxypropyl)amino]-  
 2-methylphenol 80592-81-0, 3-[(2-Hydroxyethyl)amino]-2-methylphenol  
 81892-72-0, 1,3-Di(2,4-diaminophenoxy)propane 83763-47-7,  
 2-Amino-4-[(2-hydroxyethyl)amino]anisole 84540-47-6,  
 2,6-Dihydroxy-3,4-dimethylpyridine 84540-48-7, 2,4-Diaminophenoxy acetic  
 acid 84540-50-1, 3-Amino-2-chloro-6-methylphenol 85679-78-3,  
 3,5-Diamino-2,6-dimethoxypyridine 86817-42-7, 2-(4-Amino-2-  
 hydroxyphenoxy)ethanol 90817-34-8, 3-Amino-6-methoxy-2-  
 (methylamino)pyridine 93841-24-8, 1,4-Diamino-2-(2-hydroxyethyl)benzene  
 94082-77-6, 2,4-Diamino-1,5-di(2-hydroxyethoxy)benzene 97902-52-8,  
 1,4-Diamino-2-(1-methylethyl)benzene 104333-08-6, 4-Amino-2-(2-  
 hydroxyethyl)phenol 104333-09-7, 4-Amino-2-(hydroxymethyl)phenol  
 104752-48-9, 4-[(3-Hydroxypropyl)amino]aniline 104752-50-3,  
 1-(2-Aminoethoxy)-2,4-diaminobenzene 104752-51-4, 1,2-Dichloro-3,5-  
 dihydroxy-4-methylbenzene 105293-89-8, 4-Dipropylaminoaniline  
 109942-17-8, 2,5-Diaminobiphenyl 110102-86-8, 5-Amino-4-chloro-2-  
 methylphenol 111451-24-2, 2,6-Diamino-3,5-dimethoxypyridine  
 115423-86-4, 1,3-Diamino-2,4-dimethoxybenzene 122455-85-0,  
 5-Amino-4-fluoro-2-methylphenol 122481-67-8, 2,4-Di[(2-  
 hydroxyethyl)amino]-1,5-dimethoxybenzene 126335-43-1,  
 1,4-Diamino-2-(2-hydroxyethoxy)benzene 128729-30-6, 1,3-Bis[(4-  
 aminophenyl)(2-hydroxyethyl)amino]-2-propanol 130582-53-5,  
 1,4-Bis[(4-aminophenyl)amino]butane 137290-78-9, 5-Amino-4-methoxy-2-  
 methylphenol 137290-86-9, 5-[(2-Hydroxyethyl)amino]-4-methoxy-2-  
 methylphenol 139443-57-5, 5-Amino-4-ethoxy-2-methylphenol 141614-04-2,  
 2,4-Diamino-1-ethoxy-5-methylbenzene 141614-05-3, 2,4-Diamino-1-(2-  
 hydroxyethoxy)-5-methylbenzene 141922-20-5, 2,4-Diamino-1-fluoro-5-  
 methylbenzene 142082-56-2, 3-[(2-Methoxyethyl)amino]phenol  
 146658-65-3, 5-[(3-Hydroxypropyl)amino]-2-methylphenol 149330-25-6,  
 2,6-Bis(2-hydroxyethyl)aminotoluene 155601-16-4, 4,5-Diamino-1-(1-  
 methylethyl)-1H-pyrazole 155601-17-5, 4,5-Diamino-1-(2-hydroxyethyl)-1H-  
 pyrazole 157469-54-0, 4,5-Diamino-1-[(4-methylphenyl)methyl]-1H-pyrazole  
 157469-55-1, 1-[(4-Chlorophenyl)methyl]-4,5-diamino-1H-pyrazole  
 159661-45-7, 1,8-Bis(2,5-diaminophenoxy)-3,6-dioxaoctane 168092-23-7,  
 Di(2,4-diaminophenoxy)methane 168202-61-7, 4-Amino-3-  
 (hydroxymethyl)phenol 207568-58-9, 2-[2-(Acetylamino)ethoxy]-1,4-  
 diaminobenzene 207923-07-7, 5-Amino-2-ethylphenol 244028-59-9,  
 5-[(2-Hydroxyethyl)amino]-1,3-benzodioxole 244104-61-8 246244-41-7  
 306959-12-6 307493-94-3, 1,3-Diamino-4-(3-hydroxypropoxy)benzene  
 329320-36-7, 1,4-Diamino-2-(1-hydroxyethyl)benzene 337906-36-2,  
 1,4-Diamino-2-methoxymethylbenzene

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses)  
(synthesis of 1,3-diamino-4-(aminomethyl)-benzene derivates and use in oxidative hair dyes)

IT 74-89-5, Methylamine, reactions 107-11-9, Allylamine  
107-15-3, Ethylene diamine, reactions 109-85-3, 2-Methoxyethylamine  
110-91-8, Morpholine, reactions 123-75-1, Pyrrolidine, reactions  
141-43-5, Ethanolamine, reactions 498-63-5, Prolinol 1001-53-2,  
N-Acetyl-ethylene diamine 4795-29-3, Tetrahydrofurfuryl amine  
5382-16-1, 4-Hydroxypiperidine 6168-72-5, 2-Aminopropanol 6859-99-0,  
3-Hydroxypiperidine 24424-99-5, Di-tert-butyl dicarbonate  
40499-83-0, 3-Pyrrolidinol 98276-57-4, 2,4-Diaminobenzaldehyde  
RL: RCT (Reactant); RACT (Reactant or reagent)

(synthesis of 1,3-diamino-4-(aminomethyl)-benzene derivates and use in oxidative hair dyes)

IT 364343-82-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(synthesis of 1,3-diamino-4-(aminomethyl)-benzene derivates and use in oxidative hair dyes)

L16 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2001:662335 CAPLUS

DN 135:378332

ED Entered STN: 11 Sep 2001

TI Towards self-assembled electro- and photo-active organic nanotubes

AU Fenniri, Hicham; Packiarajan, Mathivanan; Ribbe, Alexander E.; Vidale, Kenrick L.

CS 1393 H. C. Brown Laboratory of Chemistry, Purdue University, West Lafayette, IN, 47907-1393, USA

SO Polymer Preprints (American Chemical Society, Division of Polymer Chemistry) (2001), 42(2), 569-670

CODEN: ACPPAY; ISSN: 0032-3934

PB American Chemical Society, Division of Polymer Chemistry

DT Journal; (computer optical disk)

LA English

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

Section cross-reference(s): 22, 76

AB The synthesis, self-assembly, and characterization of the organic nanotubular scaffolds from self-assembled supermacrocycles of low-mol. weight synthetic modules, and its scope in the design of 1 dimensional, reversible, polymeric materials with photonic and electronic properties are discussed. A hybrid self-complementary base (M1) composed of the Watson-Crick donor-donor-acceptor hydrogen bonding array of guanine and the acceptor-acceptor-donor array of cytosine was synthesized. Electrospray ionization mass spectrometry of dilute aqueous solns. of M1 showed all the peaks corresponding to the noncovalent intermediate species of the parent rosette. M1 underwent a cooperative, hierarchical self-assembly process through H-bonding, stacking interactions, and hydrophobic effects. The system established that electrostatic, stacking, and hydrophobic interactions could be effectively orchestrated by hydrogen bonds to direct the hierarchical assembly and organization of helical nanotubular architectures in an aqueous milieu. The amenability of the synthetic scheme to oligomerization and incorporation of alternative components and bases will provide a rapid access to tubular assemblies with predefined dimensions, photonic, electronic, and transport properties.

ST nanotube self assembly supermacrocycle Watson Crick bonding

IT Circular dichroism

(of self-assembled electro- and photo-active organic nanotubes)



11/245136

IT Nanotubes  
Self-assembly  
(self-assembled electro- and photo-active organic nanotubes)  
IT 67-52-7, 2,4,6(1H,3H,5H)-Pyrimidinetrione 68-12-2, DMF, processes  
74-89-5, Methylamine, processes 100-51-6, Benzenemethanol, processes  
100-68-5, Thioanisole 107-06-2, 1,2-Dichloroethane, processes  
107-11-9, Allylamine 121-44-8, Triethylamine, processes  
407-25-0, Trifluoroacetic anhydride 7087-68-5, DIEA 24424-99-5  
27738-96-1, Carbonisocyanatidic chloride 50270-27-4 89106-03-6  
343332-60-5 343332-66-1 343332-72-9 343332-76-3  
RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC  
(Process); RACT (Reactant or reagent)

(self-assembled electro- and photo-active organic nanotubes)  
IT 121333-85-5P 343567-16-8P  
RL: PEP (Physical, engineering or chemical process); SPN (Synthetic  
preparation); PREP (Preparation); PROC (Process)

(self-assembled electro- and photo-active organic nanotubes)

RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD  
RE

- (1) Chopra, N; Science 1995, V269, P966 CAPLUS
- (2) Fenniri, H; J Am Chem Soc 2001, V123, P3854 CAPLUS
- (3) Forman, S; J Am Chem Soc 2000, V122, P4060 CAPLUS
- (4) Fuhrhop, J; J Am Chem Soc 1993, V115, P1600 CAPLUS
- (5) Gottarelli, G; Helv Chim Acta 1996, V79, P220 CAPLUS
- (6) Hamilton, E; Science 1993, V260, P659 CAPLUS
- (7) Harada, A; Nature 1993, V364, P516 CAPLUS
- (8) Iijima, S; Nature 1991, V354, P56 CAPLUS
- (9) Marsh, T; Nucleic Acids Res 1995, V23, P696 CAPLUS
- (10) Nakashima, N; J Am Chem Soc 1985, V107, P509 CAPLUS
- (11) Nelson, J; Science 1997, V277, P1793 CAPLUS
- (12) Roks, M; Macromolecules 1992, V25, P5398 CAPLUS
- (13) Schnur, J; Science 1993, V262, P1669 CAPLUS
- (14) Yoneda, F; J Chem Soc Perkin Trans 1 1976, V16, P1805

L16 ANSWER 8 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN

AN 2001:524685 CAPLUS

DN 135:111699

ED Entered STN: 20 Jul 2001

TI Hair dyes containing 2-aminoalkyl-1,4-diaminobenzene derivatives

IN Chassot, Laurent; Baun, Hans-Jurgen

PA Wella Aktiengesellschaft, Germany

SO Eur. Pat. Appl., 31 pp.

CODEN: EPXXDW

DT Patent

LA German

IC ICM C07C211-51

ICS A61K007-13; C07D215-38; C07D307-52; C07D295-12; C07D241-04;  
C07D307-12; C07C233-36; C07C239-20; C07C215-14; C07C217-08;  
C07C215-76

CC 62-3 (Essential Oils and Cosmetics)

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	EP 1116711	A2	20010718	EP 2000-115071	20000727
	EP 1116711	A3	20010926		
	EP 1116711	B1	20051214		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, CY				
	AT 312808	T	20051215	AT 2000-115071	20000727
	ES 2254077	T3	20060616	ES 2000-115071	20000727

for Connie

11/245136

JP 2001199941	A	20010724	JP 2000-364297	20001130
BR 2000006380	A	20010717	BR 2000-6380	20001218
PRAI DE 1999-19961272	A	19991218		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
EP 1116711	ICM	C07C211-51
	ICS	A61K007-13; C07D215-38; C07D307-52; C07D295-12; C07D241-04; C07D307-12; C07C233-36; C07C239-20; C07C215-14; C07C217-08; C07C215-76
	IPCI	C07C0211-51 [ICM,7]; C07C0211-00 [ICM,7,C*]; A61K0007-13 [ICS,7]; C07D0215-38 [ICS,7]; C07D0215-00 [ICS,7,C*]; C07D0307-52 [ICS,7]; C07D0295-12 [ICS,7]; C07D0295-00 [ICS,7,C*]; C07D0241-04 [ICS,7]; C07D0241-00 [ICS,7,C*]; C07D0307-12 [ICS,7]; C07D0307-00 [ICS,7,C*]; C07C0233-36 [ICS,7]; C07C0233-00 [ICS,7,C*]; C07C0239-20 [ICS,7]; C07C0239-00 [ICS,7,C*]; C07C0215-14 [ICS,7]; C07C0217-08 [ICS,7]; C07C0217-00 [ICS,7,C*]; C07C0215-76 [ICS,7]; C07C0215-00 [ICS,7,C*]
	IPCR	C07D0295-12 [I,A]; A61K0008-00 [I,C*]; A61K0008-00 [I,A]; A61K0008-30 [I,C*]; A61K0008-33 [I,A]; A61K0008-41 [I,A]; A61K0008-49 [I,A]; A61Q0005-10 [I,C*]; A61Q0005-10 [I,A]; C07C0211-00 [I,C*]; C07C0211-29 [I,A]; C07C0211-51 [I,A]; C07C0211-52 [I,A]; C07C0215-00 [I,C*]; C07C0215-10 [I,A]; C07C0215-12 [I,A]; C07C0215-14 [I,A]; C07C0215-50 [I,A]; C07C0215-60 [I,A]; C07C0215-68 [I,A]; C07C0215-76 [I,A]; C07C0217-00 [I,C*]; C07C0217-08 [I,A]; C07C0217-68 [I,A]; C07C0217-84 [I,A]; C07C0229-00 [I,C*]; C07C0229-16 [I,A]; C07C0229-24 [I,A]; C07C0229-56 [I,A]; C07C0233-00 [I,C*]; C07C0233-36 [I,A]; C07C0237-00 [I,C*]; C07C0237-06 [I,A]; C07C0239-00 [I,C*]; C07C0239-20 [I,A]; C07C0255-00 [I,C*]; C07C0255-03 [I,A]; C07C0255-24 [I,A]; C07C0311-00 [I,C*]; C07C0311-37 [I,A]; C07C0311-39 [I,A]; C07C0323-00 [I,C*]; C07C0323-58 [I,A]; C07D0207-00 [I,C*]; C07D0207-08 [I,A]; C07D0207-12 [I,A]; C07D0207-16 [I,A]; C07D0207-27 [I,A]; C07D0211-00 [I,C*]; C07D0211-42 [I,A]; C07D0211-46 [I,A]; C07D0213-00 [I,C*]; C07D0213-38 [I,A]; C07D0213-74 [I,A]; C07D0217-00 [I,C*]; C07D0217-04 [I,A]; C07D0233-00 [I,C*]; C07D0233-61 [I,A]; C07D0295-00 [I,C*]; C07D0295-13 [I,A]; C07D0295-135 [I,A]; C07D0307-00 [I,C*]; C07D0307-14 [I,A]; C07D0307-54 [I,A]; C07D0317-00 [I,C*]; C07D0317-58 [I,A]; C07D0317-66 [I,A]; C07D0333-00 [I,C*]; C07D0333-20 [I,A]; D06P0003-04 [I,C*]; D06P0003-08 [I,A]
	ECLA	A61K008/41C; A61K008/41H; A61K008/41R; A61K008/49C4; A61K008/49F; A61Q005/10; C07C211/29; C07C211/51; C07C211/52; C07C215/10; C07C215/12; C07C215/14; C07C215/60; C07C215/68; C07C215/76; C07C217/08; C07C217/84; C07C229/16; C07C229/24; C07C229/56; C07C233/36; C07C237/06; C07C239/20; C07C255/03; C07C311/37; C07C323/58; C07D295/12A2; C07D295/12A3; C07D295/12B1B1
AT 312808	IPCR	A61K0008-30 [I,C*]; A61Q0005-10 [I,C*]; C07C0211-00 [I,C*]; C07C0215-00 [I,C*]; C07C0217-00 [I,C*]; C07C0229-00 [I,C*]; C07C0233-00 [I,C*]; C07C0237-00

for Connie

[I,C\*]; C07C0239-00 [I,C\*]; C07C0255-00 [I,C\*];  
 C07C0311-00 [I,C\*]; C07C0323-00 [I,C\*]; C07D0295-00  
 [I,C\*]; A61K0008-41 [I,A]; A61K0008-49 [I,A];  
 A61Q0005-10 [I,A]; C07C0211-29 [I,A]; C07C0211-51  
 [I,A]; C07C0211-52 [I,A]; C07C0215-10 [I,A];  
 C07C0215-12 [I,A]; C07C0215-14 [I,A]; C07C0215-60  
 [I,A]; C07C0215-68 [I,A]; C07C0215-76 [I,A];  
 C07C0217-08 [I,A]; C07C0217-84 [I,A]; C07C0229-16  
 [I,A]; C07C0229-24 [I,A]; C07C0229-56 [I,A];  
 C07C0233-36 [I,A]; C07C0237-06 [I,A]; C07C0239-20  
 [I,A]; C07C0255-03 [I,A]; C07C0311-37 [I,A];  
 C07C0323-58 [I,A]; C07D0295-13 [I,A]; C07D0295-135  
 [I,A]

ECLA A61K008/41C; A61K008/41H; A61K008/41R; A61K008/49C4;  
 A61K008/49F; A61Q005/10; C07C211/29; C07C211/51;  
 C07C211/52; C07C215/10; C07C215/12; C07C215/14;  
 C07C215/60; C07C215/68; C07C215/76; C07C217/08;  
 C07C217/84; C07C229/16; C07C229/24; C07C229/56;  
 C07C233/36; C07C237/06; C07C239/20; C07C255/03;  
 C07C311/37; C07C323/58; C07D295/12A2; C07D295/12A3;  
 C07D295/12B1B1

ES 2254077

IPCI C07C0211-51 [ICS,7]; C07C0211-00 [ICS,7,C\*];  
 A61K0007-13 [ICS,7]; C07C0215-14 [ICS,7]; C07C0215-76  
 [ICS,7]; C07C0215-00 [ICS,7,C\*]; C07C0217-08 [ICS,7];  
 C07C0217-00 [ICS,7,C\*]; C07C0233-36 [ICS,7];  
 C07C0233-00 [ICS,7,C\*]; C07C0239-20 [ICS,7];  
 C07C0239-00 [ICS,7,C\*]; C07D0215-38 [ICS,7];  
 C07D0215-00 [ICS,7,C\*]; C07D0241-04 [ICS,7];  
 C07D0241-00 [ICS,7,C\*]; C07D0295-12 [ICS,7];  
 C07D0295-00 [ICS,7,C\*]; C07D0307-12 [ICS,7];  
 C07D0307-52 [ICS,7]; C07D0307-00 [ICS,7,C\*]

IPCR C07D0295-12 [I,A]; A61K0008-00 [I,C\*]; A61K0008-00  
 [I,A]; A61K0008-30 [I,C\*]; A61K0008-33 [I,A];  
 A61K0008-41 [I,A]; A61K0008-49 [I,A]; A61Q0005-10  
 [I,C\*]; A61Q0005-10 [I,A]; C07C0211-00 [I,C\*];  
 C07C0211-29 [I,A]; C07C0211-51 [I,A]; C07C0211-52  
 [I,A]; C07C0215-00 [I,C\*]; C07C0215-10 [I,A];  
 C07C0215-12 [I,A]; C07C0215-14 [I,A]; C07C0215-50  
 [I,A]; C07C0215-60 [I,A]; C07C0215-68 [I,A];  
 C07C0215-76 [I,A]; C07C0217-00 [I,C\*]; C07C0217-08  
 [I,A]; C07C0217-68 [I,A]; C07C0217-84 [I,A];  
 C07C0229-00 [I,C\*]; C07C0229-16 [I,A]; C07C0229-24  
 [I,A]; C07C0229-56 [I,A]; C07C0233-00 [I,C\*];  
 C07C0233-36 [I,A]; C07C0237-00 [I,C\*]; C07C0237-06  
 [I,A]; C07C0239-00 [I,C\*]; C07C0239-20 [I,A];  
 C07C0255-00 [I,C\*]; C07C0255-03 [I,A]; C07C0255-24  
 [I,A]; C07C0311-00 [I,C\*]; C07C0311-37 [I,A];  
 C07C0311-39 [I,A]; C07C0323-00 [I,C\*]; C07C0323-58  
 [I,A]; C07D0207-00 [I,C\*]; C07D0207-08 [I,A];  
 C07D0207-12 [I,A]; C07D0207-16 [I,A]; C07D0207-27  
 [I,A]; C07D0211-00 [I,C\*]; C07D0211-42 [I,A];  
 C07D0211-46 [I,A]; C07D0213-00 [I,C\*]; C07D0213-38  
 [I,A]; C07D0213-74 [I,A]; C07D0217-00 [I,C\*];  
 C07D0217-04 [I,A]; C07D0233-00 [I,C\*]; C07D0233-61  
 [I,A]; C07D0295-00 [I,C\*]; C07D0295-13 [I,A];  
 C07D0295-135 [I,A]; C07D0307-00 [I,C\*]; C07D0307-14  
 [I,A]; C07D0307-54 [I,A]; C07D0317-00 [I,C\*];  
 C07D0317-58 [I,A]; C07D0317-66 [I,A]; C07D0333-00  
 [I,C\*]; C07D0333-20 [I,A]; D06P0003-04 [I,C\*];  
 D06P0003-08 [I,A]

ECLA A61K008/41C; A61K008/41H; A61K008/41R; A61K008/49C4;  
A61K008/49F; A61Q005/10; C07C211/29; C07C211/51;  
C07C211/52; C07C215/10; C07C215/12; C07C215/14;  
C07C215/60; C07C215/68; C07C215/76; C07C217/08;  
C07C217/84; C07C229/16; C07C229/24; C07C229/56;  
C07C233/36; C07C237/06; C07C239/20; C07C255/03;  
C07C311/37; C07C323/58; C07D295/12A2; C07D295/12A3;  
C07D295/12B1B1

JP 2001199941 IPCI C07C0211-51 [ICM,7]; A61K0007-13 [ICS,7]; C07C0211-52  
[ICS,7]; C07C0211-00 [ICS,7,C\*]; C07C0215-14 [ICS,7];  
C07C0215-50 [ICS,7]; C07C0215-60 [ICS,7]; C07C0215-68  
[ICS,7]; C07C0215-76 [ICS,7]; C07C0215-00 [ICS,7,C\*];  
C07C0217-08 [ICS,7]; C07C0217-68 [ICS,7]; C07C0217-84  
[ICS,7]; C07C0217-00 [ICS,7,C\*]; C07C0229-24 [ICS,7];  
C07C0229-56 [ICS,7]; C07C0229-00 [ICS,7,C\*];  
C07C0233-36 [ICS,7]; C07C0233-00 [ICS,7,C\*];  
C07C0237-06 [ICS,7]; C07C0237-00 [ICS,7,C\*];  
C07C0239-20 [ICS,7]; C07C0239-00 [ICS,7,C\*];  
C07C0255-24 [ICS,7]; C07C0255-00 [ICS,7,C\*];  
C07C0311-39 [ICS,7]; C07C0311-00 [ICS,7,C\*];  
C07D0207-08 [ICS,7]; C07D0207-12 [ICS,7]; C07D0207-00  
[ICS,7,C\*]

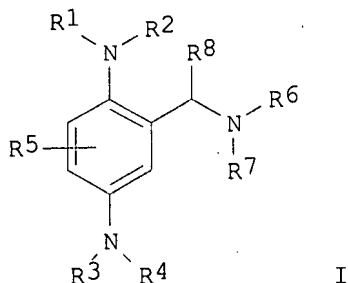
IPCR C07D0295-12 [I,A]; A61K0008-00 [I,C\*]; A61K0008-00  
[I,A]; A61K0008-30 [I,C\*]; A61K0008-33 [I,A];  
A61K0008-41 [I,A]; A61K0008-49 [I,A]; A61Q0005-10  
[I,C\*]; A61Q0005-10 [I,A]; C07C0211-00 [I,C\*];  
C07C0211-29 [I,A]; C07C0211-51 [I,A]; C07C0211-52  
[I,A]; C07C0215-00 [I,C\*]; C07C0215-10 [I,A];  
C07C0215-12 [I,A]; C07C0215-14 [I,A]; C07C0215-50  
[I,A]; C07C0215-60 [I,A]; C07C0215-68 [I,A];  
C07C0215-76 [I,A]; C07C0217-00 [I,C\*]; C07C0217-08  
[I,A]; C07C0217-68 [I,A]; C07C0217-84 [I,A];  
C07C0229-00 [I,C\*]; C07C0229-16 [I,A]; C07C0229-24  
[I,A]; C07C0229-56 [I,A]; C07C0233-00 [I,C\*];  
C07C0233-36 [I,A]; C07C0237-00 [I,C\*]; C07C0237-06  
[I,A]; C07C0239-00 [I,C\*]; C07C0239-20 [I,A];  
C07C0255-00 [I,C\*]; C07C0255-03 [I,A]; C07C0255-24  
[I,A]; C07C0311-00 [I,C\*]; C07C0311-37 [I,A];  
C07C0311-39 [I,A]; C07C0323-00 [I,C\*]; C07C0323-58  
[I,A]; C07D0207-00 [I,C\*]; C07D0207-08 [I,A];  
C07D0207-12 [I,A]; C07D0207-16 [I,A]; C07D0207-27  
[I,A]; C07D0211-00 [I,C\*]; C07D0211-42 [I,A];  
C07D0211-46 [I,A]; C07D0213-00 [I,C\*]; C07D0213-38  
[I,A]; C07D0213-74 [I,A]; C07D0217-00 [I,C\*];  
C07D0217-04 [I,A]; C07D0233-00 [I,C\*]; C07D0233-61  
[I,A]; C07D0295-00 [I,C\*]; C07D0295-13 [I,A];  
C07D0295-135 [I,A]; C07D0307-00 [I,C\*]; C07D0307-14  
[I,A]; C07D0307-54 [I,A]; C07D0317-00 [I,C\*];  
C07D0317-58 [I,A]; C07D0317-66 [I,A]; C07D0333-00  
[I,C\*]; C07D0333-20 [I,A]; D06P0003-04 [I,C\*];  
D06P0003-08 [I,A]

BR 2000006380 IPCI C07D0207-50 [ICM,7]; C07D0207-00 [ICM,7,C\*];  
C07D0211-98 [ICS,7]; C07D0211-00 [ICS,7,C\*];  
C07D0265-30 [ICS,7]; C07D0265-00 [ICS,7,C\*];  
C07D0241-04 [ICS,7]; C07D0241-00 [ICS,7,C\*];  
C07C0211-50 [ICS,7]; C07C0211-00 [ICS,7,C\*];  
A61K0007-13 [ICS,7]

IPCR C07D0295-12 [I,A]; A61K0008-00 [I,C\*]; A61K0008-00  
[I,A]; A61K0008-30 [I,C\*]; A61K0008-33 [I,A];  
A61K0008-41 [I,A]; A61K0008-49 [I,A]; A61Q0005-10

[I,C\*]; A61Q0005-10 [I,A]; C07C0211-00 [I,C\*];  
 C07C0211-29 [I,A]; C07C0211-51 [I,A]; C07C0211-52  
 [I,A]; C07C0215-00 [I,C\*]; C07C0215-10 [I,A];  
 C07C0215-12 [I,A]; C07C0215-14 [I,A]; C07C0215-50  
 [I,A]; C07C0215-60 [I,A]; C07C0215-68 [I,A];  
 C07C0215-76 [I,A]; C07C0217-00 [I,C\*]; C07C0217-08  
 [I,A]; C07C0217-68 [I,A]; C07C0217-84 [I,A];  
 C07C0229-00 [I,C\*]; C07C0229-16 [I,A]; C07C0229-24  
 [I,A]; C07C0229-56 [I,A]; C07C0233-00 [I,C\*];  
 C07C0233-36 [I,A]; C07C0237-00 [I,C\*]; C07C0237-06  
 [I,A]; C07C0239-00 [I,C\*]; C07C0239-20 [I,A];  
 C07C0255-00 [I,C\*]; C07C0255-03 [I,A]; C07C0255-24  
 [I,A]; C07C0311-00 [I,C\*]; C07C0311-37 [I,A];  
 C07C0311-39 [I,A]; C07C0323-00 [I,C\*]; C07C0323-58  
 [I,A]; C07D0207-00 [I,C\*]; C07D0207-08 [I,A];  
 C07D0207-12 [I,A]; C07D0207-16 [I,A]; C07D0207-27  
 [I,A]; C07D0211-00 [I,C\*]; C07D0211-42 [I,A];  
 C07D0211-46 [I,A]; C07D0213-00 [I,C\*]; C07D0213-38  
 [I,A]; C07D0213-74 [I,A]; C07D0217-00 [I,C\*];  
 C07D0217-04 [I,A]; C07D0233-00 [I,C\*]; C07D0233-61  
 [I,A]; C07D0295-00 [I,C\*]; C07D0295-13 [I,A];  
 C07D0295-135 [I,A]; C07D0307-00 [I,C\*]; C07D0307-14  
 [I,A]; C07D0307-54 [I,A]; C07D0317-00 [I,C\*];  
 C07D0317-58 [I,A]; C07D0317-66 [I,A]; C07D0333-00  
 [I,C\*]; C07D0333-20 [I,A]; D06P0003-04 [I,C\*];  
 D06P0003-08 [I,A]

OS MARPAT 135:111699  
 GI



AB The invention concerns oxidative hair dyes that contain as developers 2-aminoalkyl-1,4-diaminobenzene derivs. or their physiol. compatible water soluble salts of the formula (I), where R1-R7 are defined. The hair dye compns. further contain another developer, e.g. 1,4-diaminobenzene, 2,5-diaminotoluene; coupling agents, e.g. 2,6-diaminopyridine; and at least one direct dye. Thus, bromo-p-phenylenediamine-HCl was converted with di-tert-Bu dicarbonate to 2,5-bis(tert-butoxycarbonylamino)bromobenzene, and then with DMF in the presence of methyllithium and butyllithium to (2-formyl-1,4-phenylene)biscarbamic acid di(tert-butyl)ester. This compound was reacted with ethylamine and the hydrochloride of the formed substance was prepared. The obtained 2-ethylaminomethyl-1,4-diamino benzene hydrochloride was used (0.0125 mmol) in a hair dye, that further contained: 1,3-dihydroxybenzene (coupling agent) 0.0125 mmol; potassium oleate (8% aqueous solution) 0.01 g; ammonia (22% aqueous solution) 0.01 g; ethanol 0.01 g; ascorbic acid 0.003 g; water to 1 g. The dye resulted a light blond color.

for Connie

11/245136

ST aminoalkyl diaminobenzene deriv oxidative hair dye  
IT Dyes  
(direct; hair dyes containing 2-aminoalkyl-1,4-diaminobenzene derivs.)  
IT Hair preparations  
(dyes, oxidative; hair dyes containing 2-aminoalkyl-1,4-diaminobenzene derivs.)  
IT Coupling agents  
(hair dyes containing 2-aminoalkyl-1,4-diaminobenzene derivs.)  
IT 615-50-9  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(2,5-Diaminotoluene sulfate; hair dyes containing 2-aminoalkyl-1,4-diaminobenzene derivs.)  
IT 6358-09-4, 2-Amino-6-chloro-4-nitrophenol 28365-08-4 53347-10-7  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(direct dye; hair dyes containing 2-aminoalkyl-1,4-diaminobenzene derivs.)  
IT 83-56-7, 1,5-Dihydroxynaphthalene 89-25-8, 3-Methyl-1-phenyl-5-pyrazolone 89-83-8, 5-Methyl-2-(1-methylethyl)phenol 90-15-3, 1-Naphthol 91-56-5, 2,3-Indolinedione 91-68-9, 3-Diethylaminophenol 92-44-4, 2,3-Dihydroxynaphthalene 95-70-5, 2,5-Diaminotoluene 95-88-5, 1,3-Benzenediol, 4-chloro- 99-07-0, 3-Dimethylaminophenol 106-50-3, 1,4-Diaminobenzene, biological studies 106-50-3D, 1,4-Benzenediamine, 2-aminoalkyl derivs., biological studies 108-45-2, 1,3-Diaminobenzene, biological studies 108-46-3, 1,3-Dihydroxybenzene, biological studies 137-19-9 141-86-6, 2,6-Diaminopyridine 533-31-3, 3,4-Methylenedioxyphenol 575-38-2, 1,7-Dihydroxynaphthalene 582-17-2, 2,7-Dihydroxynaphthalene 608-25-3, 1,3-Dihydroxy-2-methylbenzene 619-05-6, 3,4-Diaminobenzoic acid 770-25-2 1953-54-4, 5-Hydroxyindole 2380-84-9, 7-Hydroxyindole 2380-86-1, 6-Hydroxyindole 2380-94-1, 4-Hydroxyindole 2835-99-6, 3-Methyl-4-aminophenol 3131-52-0, 5,6-Dihydroxyindole 5349-76-8, 2,4-Diamino-1-methoxy-5-methylbenzene 5697-02-9, 2-Methyl-1-naphthyl-acetate 6201-65-6, 2-Chloro-1,3-dihydroxybenzene 6265-21-0, 3-[(2-Hydroxyethyl)amino]aniline 6941-70-4, 6-Bromo-1-hydroxy-3,4-methylenedioxybenzene 7228-00-4 16867-03-1, 2-Amino-3-hydroxypyridine 26011-57-4, 6-Amino-3,4-dihydro-1,4(2H)benzoxazine 26021-57-8, 3,4-Dihydro-6-hydroxy-1,4(2H)benzoxazine 26455-21-0, N-(3-Dimethylamino)phenylurea 28020-38-4, 2,3-Diamino-6-methoxypyridine 29539-03-5, 5,6-Dihydroxyindoline 39489-79-7, 5-Amino-2,4-dichloro-phenol 53222-92-7, 3-Amino-2-methylphenol 54381-16-7 55302-96-0, 5-[(2-Hydroxyethyl)amino]-2-methylphenol 56216-28-5, 3,5-Diamino-2,6-dimethoxypyridine-dihydrochloride 61693-42-3, 3-Amino-2,4-dichloro-phenol 70643-19-5, 2,4-Diamino-1-(2-hydroxyethoxy)benzene 70643-20-8 71500-41-9 71500-42-0 74918-21-1, 1,3-Bis(2,4-Diaminophenoxy)propane-tetrahydrochloride 76045-64-2 78661-33-3 80592-80-9 80592-81-0 81329-90-0 81892-72-0 83763-47-7, 2-Amino-4-[(2-hydroxyethyl)amino]anisole 83763-48-8 84540-48-7 84540-50-1, 3-Amino-2-chloro-6-methylphenol 86817-42-7, 2-(4-Amino-2-hydroxyphenoxy)ethanol 90817-34-8, 3-Amino-6-methoxy-2-(methylamino)pyridine 93841-24-8, 2-(2,5-Diaminophenyl)ethanol 93841-25-9 94082-77-6 104752-50-3 104752-51-4 110102-86-8, 5-Amino-4-chloro-2-methylphenol 111451-24-2, 2,6-Diamino-3,5-dimethoxypyridine 115423-86-4, 1,3-Diamino-2,4-dimethoxybenzene 122455-85-0 122481-67-8 135043-64-0, 4-Amino-2-aminomethylphenol-dihydrochloride 137290-78-9, 5-Amino-4-methoxy-2-methylphenol 139443-57-5, 5-Amino-4-ethoxy-2-methylphenol 141614-04-2, 1,3-Benzenediamine, 4-ethoxy-6-methyl- 141614-05-3, 2,4-Diamino-1-(2-hydroxyethoxy)-5-methylbenzene 141922-20-5, 2,4-Diamino-1-fluoro-5-methylbenzene 142082-56-2 146658-65-3 149330-25-6 155601-30-2 168092-23-7 207923-07-7 217311-43-8 350482-01-8 350482-02-9  
RL: BSU (Biological study, unclassified); BIOL (Biological study)

for Connie

(hair dyes containing 2-aminoalkyl-1,4-diaminobenzene derivs.)

IT 123-30-8, 4-Aminophenol 591-27-5, 3-Aminophenol  
 RL: BSU (Biological study, unclassified); RCT (Reactant); BIOL (Biological study); RACT (Reactant or reagent)

(hair dyes containing 2-aminoalkyl-1,4-diaminobenzene derivs.)

IT 350481-06-0P 350481-07-1P 350481-08-2P 350481-09-3P 350481-10-6P  
 350481-11-7P 350481-12-8P 350481-13-9P 350481-14-0P 350481-15-1P  
 350481-16-2P 350481-17-3P 350481-18-4P 350481-19-5P 350481-20-8P  
 350481-21-9P 350481-22-0P 350481-23-1P 350481-24-2P 350481-25-3P  
 350481-26-4P 350481-27-5P 350481-28-6P 350481-29-7P 350481-30-0P  
 350481-31-1P 350481-32-2P 350481-33-3P 350481-34-4P 350481-35-5P  
 350481-36-6P 350481-37-7P 350481-38-8P 350481-39-9P 350481-40-2P  
 350481-41-3P 350481-42-4P 350481-43-5P 350481-44-6P 350481-45-7P  
 350481-46-8P 350481-47-9P 350481-48-0P 350481-49-1P 350481-50-4P  
 350481-51-5P 350481-52-6P 350481-53-7P 350481-54-8P 350481-55-9P  
 350481-56-0P 350481-57-1P 350481-58-2P 350481-59-3P 350481-60-6P  
 350481-61-7P 350481-62-8P 350481-63-9P 350481-64-0P 350481-65-1P  
 350481-66-2P 350481-67-3P 350481-68-4P 350481-69-5P 350481-70-8P  
 350481-71-9P 350481-72-0P 350481-73-1P 350481-74-2P 350481-75-3P  
 350481-76-4P 350481-77-5P 350481-78-6P 350481-79-7P 350481-80-0P  
 350481-81-1P 350481-82-2P 350481-83-3P 350481-84-4P 350481-85-5P  
 350481-86-6P 350481-87-7P 350481-88-8P 350481-89-9P 350481-90-2P  
 350481-91-3P 350481-92-4P 350481-93-5P 350481-94-6P 350481-95-7P  
 350481-96-8P 350481-99-1P 350482-00-7P  
 RL: BSU (Biological study, unclassified); SPN (Synthetic preparation);  
 BIOL (Biological study); PREP (Preparation)

(hair dyes containing 2-aminoalkyl-1,4-diaminobenzene derivs.)

IT 59-51-8, Methionine 62-53-3, Aniline, reactions 75-04-7, Ethylamine,  
 reactions 75-31-0, Isopropylamine, reactions 95-85-2,  
 4-Chloro-2-aminophenol 97-51-8, 2-Hydroxy-5-nitrobenzaldehyde 98-03-3,  
 Thiophene-2-carbaldehyde 99-57-0, 2-Amino-4-nitrophenol 99-98-9,  
 4-Amino-N,N-dimethylaniline 100-52-7, Benzaldehyde, reactions  
 104-86-9, 4-Chlorobenzylamine 106-47-8, 4-Chloroaniline, reactions  
 106-49-0, 4-Methylaniline, reactions 107-10-8, Propylamine, reactions  
 107-11-9, Allylamine 108-00-9, 2-Dimethylamino ethylamine  
 109-01-3 109-55-7, 3-Dimethylamino propylamine 109-83-1, 2-Methylamino  
 ethanol 109-85-3, 2-Methoxy ethylamine 110-58-7, Pentylamine  
 110-73-6, 2-Ethylamino-ethanol 110-91-8, Morpholine, reactions  
 111-42-2, Diethanolamine, reactions 120-57-0, 3,4-  
 Methyleneedioxybenzaldehyde 123-08-0, 4-Hydroxybenzaldehyde 123-72-8,  
 Butyraldehyde 123-75-1, Pyrrolidine, reactions 364-73-8, Benzene,  
 4-bromo-1-fluoro-2-nitro- 364-74-9, 1,4-Difluoro-2-nitrobenzene  
 364-76-1 437-83-2, 3-Fluoro-2-methoxy aniline 446-35-5,  
 1,3-Difluoro-4-nitrobenzene 455-14-1, 4-Trifluoromethyl aniline  
 498-63-5, Prolinol 500-22-1, Pyridine-3-carbaldehyde 536-21-0,  
 1-(3-Hydroxyphenyl)-2-aminoethanol 536-90-3, 3-Methoxyaniline  
 555-16-8, 4-Nitrobenzaldehyde, reactions 579-72-6, 2-  
 Dimethylaminobenzaldehyde 587-04-2, 3-Chlorobenzaldehyde 590-86-3,  
 3-Methylbutyraldehyde 609-36-9, Proline 616-30-8, 3-Amino-1,2-propane  
 diol 617-45-8, Aspartic acid 617-89-0, Furfurylamine 765-30-0,  
 Cyclopropylamine 872-85-5, Pyridine-4-carbaldehyde 1117-97-1,  
 O,N-Dimethyl-hydroxylamine 1121-60-4, 2-Pyridinecarboxaldehyde  
 1493-27-2, 1-Fluoro-2-nitrobenzene 2038-03-1, 4-Morpholineethanamine  
 2043-61-0, Cyclohexane carbaldehyde 2454-37-7, 3-(1-Hydroxyethyl)-  
 aniline 2516-47-4, Aminomethyl cyclopropane 2812-47-7, Prolinamide  
 2835-95-2, 3-Amino-6-methylphenol 3731-51-9, 2-Picolylamine 3731-53-1,  
 4-Picolylamine 4214-76-0, 2-Amino-5-nitropyridine 4795-29-3,  
 Tetrahydrofurfurylamine 5036-48-6, 1-(3-Aminopropyl)imidazole  
 5382-16-1, 4-Hydroxypiperidine 5616-32-0, Methylaminoacetone nitrile  
 6168-72-5, 2-Aminopropanol 6291-85-6, 3-Ethoxypropylamine 6315-89-5,

11/245136

3,4-Dimethoxy aniline 6859-99-0, 3-Hydroxypiperidine 6921-22-8  
7304-32-7, 2-Fluoro-5-nitro benzoic acid 7663-77-6, 1-(3-Aminopropyl)-2-  
pyrrolidone 13325-10-5, 4-Aminobutanol 14268-66-7, 3,4-Methylene  
dioxylaniline 24424-99-5, Di-tert-butyl dicarbonate 25739-59-7  
35303-76-5, 4-(2-Aminoethyl)-benzenesulfonamide 40499-83-0,  
3-Hydroxypyrrolidine 51980-54-2, 4-Pyrrolidino benzaldehyde 68621-88-5  
71026-66-9 244104-66-3 325953-40-0 325953-41-1 325953-45-5  
325953-46-6 325953-48-8

RL: RCT (Reactant); RACT (Reactant or reagent)  
(hair dyes containing 2-aminoalkyl-1,4-diaminobenzene derivs.)

IT 244104-65-2P 325953-36-4P 350481-97-9P 350481-98-0P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(hair dyes containing 2-aminoalkyl-1,4-diaminobenzene derivs.)

L16 ANSWER 9 OF 9 CAPLUS COPYRIGHT 2007 ACS on STN

AN 1996:353642 CAPLUS

DN 125:34158

ED Entered STN: 19 Jun 1996

TI Preparation of N-[5-[2-(2-amino-4-oxo-4,6,7,8-tetrahydro-3H-pyrimido[5,4-  
b][1,4]thiazin-6-yl)ethyl]-2-thienoyl]-L-glutamic acid derivative and  
analog as antiproliferative agents and glycine ribonucleotide formyl  
transferase (GARFT) inhibitors

IN Varney, Michael D.; Romines, William H.; Palmer, Cynthia L.

PA Agouron Pharmaceuticals, Inc., USA

SO PCT Int. Appl., 58 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM C07D513-04

ICS C07D498-04; C07D517-04; C07D333-38; C07D417-06; A61K031-54

ICI C07D513-04, C07D279-00, C07D239-00; C07D498-04, C07D265-00, C07D239-00;  
C07D517-04, C07D293-00, C07D239-00

CC 34-2 (Amino Acids, Peptides, and Proteins)

Section cross-reference(s): 1

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9603407	A1	19960208	WO 1994-US8522	19940728
	W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LT, LU, LV, MD, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA, UZ, VN RW: KE, MW, SD, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9475520	A	19960222	AU 1994-75520	19940728
	AU 698868	B2	19981112		
	EP 783507	A1	19970716	EP 1994-925701	19940728
	EP 783507	B1	20030604		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	JP 10504541	T	19980506	JP 1996-505704	19940728
	JP 3473956	B2	20031208		
	RU 2136686	C1	19990910	RU 1997-103519	19940728
	AT 242253	T	20030615	AT 1994-925701	19940728
	PT 783507	T	20030829	PT 1994-925701	19940728
	ES 2201079	T3	20040316	ES 1994-925701	19940728
	FI 9700318	A	19970305	FI 1997-318	19970124
	FI 112661	B1	20031231		
	NO 9700350	A	19970312	NO 1997-350	19970127
	NO 308997	B1	20001127		
PRAI	EP 1994-925701	A	19940728		

for Connie



11/245136

WO 1994-US8522

W

19940728

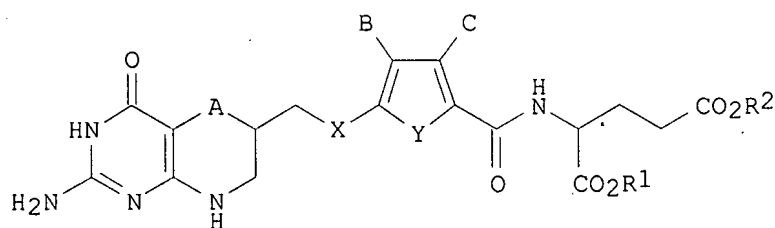
## CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 9603407	ICM	C07D513-04
	ICS	C07D498-04; C07D517-04; C07D333-38; C07D417-06; A61K031-54
	ICI	C07D513-04, C07D279-00, C07D239-00; C07D498-04, C07D265-00, C07D239-00; C07D517-04, C07D293-00, C07D239-00
	IPCI	C07D0513-04 [ICM,6]; C07D0498-04 [ICS,6]; C07D0517-04 [ICS,6]; C07D0333-38 [ICS,6]; C07D0333-00 [ICS,6,C*]; C07D0417-06 [ICS,6]; C07D0417-00 [ICS,6,C*]; A61K0031-54 [ICS,6]; C07D0513-04 [ICI,6]; C07D0513-00 [ICI,6,C*]; C07D0279-00 [ICI,6]; C07D0239-00 [ICI,6]; C07D0498-04 [ICI,6]; C07D0498-00 [ICI,6,C*]; C07D0265-00 [ICI,6]; C07D0239-00 [ICI,6]; C07D0517-04 [ICI,6]; C07D0517-00 [ICI,6,C*]; C07D0293-00 [ICI,6]; C07D0239-00 [ICI,6]
	IPCR	C07D0333-00 [I,C*]; C07D0333-38 [I,A]; C07D0417-00 [I,C*]; C07D0417-06 [I,A]; C07D0498-00 [I,C*]; C07D0498-04 [I,A]; C07D0513-00 [I,C*]; C07D0513-04 [I,A]; C07D0517-00 [I,C*]; C07D0517-04 [I,A]
	ECLA	C07D333/38; C07D417/06+333B+279; C07D498/04+265B+239B; C07D513/04+279B+239B; C07D517/04+293B+239B
AU 9475520	IPCI	C07D0513-04 [ICM,6]; C07D0513-00 [ICM,6,C*]; C07D0498-04 [ICS,6]; C07D0498-00 [ICS,6,C*]; C07D0517-04 [ICS,6]; C07D0517-00 [ICS,6,C*]; C07D0333-38 [ICS,6]; C07D0333-00 [ICS,6,C*]; C07D0417-06 [ICS,6]; C07D0417-00 [ICS,6,C*]; A61K0031-54 [ICS,6]
	IPCR	A61K [I,S]; A61K0031-54 [I,C*]; A61K0031-54 [I,A]; C07D [I,S]; C07D0333-00 [I,C*]; C07D0333-38 [I,A]; C07D0417-00 [I,C*]; C07D0417-06 [I,A]; C07D0498-00 [I,C*]; C07D0498-04 [I,A]; C07D0513-00 [I,C*]; C07D0513-04 [I,A]; C07D0517-00 [I,C*]; C07D0517-04 [I,A]
EP 783507	IPCI	C07D0513-04 [ICM,6]; C07D0498-04 [ICS,6]; C07D0517-04 [ICS,6]; C07D0333-38 [ICS,6]; C07D0333-00 [ICS,6,C*]; C07D0417-06 [ICS,6]; C07D0417-00 [ICS,6,C*]; A61K0031-54 [ICS,6]; C07D0513-04 [ICI,6]; C07D0513-00 [ICI,6,C*]; C07D0279-00 [ICI,6]; C07D0239-00 [ICI,6]; C07D0498-04 [ICI,6]; C07D0498-00 [ICI,6,C*]; C07D0265-00 [ICI,6]; C07D0239-00 [ICI,6]; C07D0517-04 [ICI,6]; C07D0517-00 [ICI,6,C*]; C07D0293-00 [ICI,6]; C07D0239-00 [ICI,6]
	IPCR	A61K [I,S]; A61K0031-54 [I,C*]; A61K0031-54 [I,A]; C07D [I,S]; C07D0333-00 [I,C*]; C07D0333-38 [I,A]; C07D0417-00 [I,C*]; C07D0417-06 [I,A]; C07D0498-00 [I,C*]; C07D0498-04 [I,A]; C07D0513-00 [I,C*]; C07D0513-04 [I,A]; C07D0517-00 [I,C*]; C07D0517-04 [I,A]
JP 10504541	IPCI	C07D0498-04; C07D0498-00 [C*]; A61K0031-505; C07D0513-04; C07D0513-00 [C*]; C07D0517-04; C07D0517-00 [C*]
RU 2136686	IPCI	C07D0513-04 [ICM,6]; C07D0417-06 [ICS,6]; C07D0333-38 [ICS,6]; C07D0333-40 [ICS,6]; A61K0031-54 [ICS,6]; C07D0513-04 [ICI,6]; C07D0513-00 [ICI,6,C*]; C07D0239-00 [ICI,6]; C07D0279-14 [ICI,6]; C07D0417-06 [ICI,6]; C07D0417-00 [ICI,6,C*]; C07D0279-12 [ICI,6];

for Connie

C07D0279-00 [ICI,6,C\*]; C07D0333-38 [ICI,6];  
 C07D0333-00 [ICI,6,C\*]  
 AT 242253      IPCR      C07D0498-00 [I,C\*]; C07D0498-04 [I,A]; A61K0031-505  
                                  [I,C\*]; A61K0031-505 [I,A]; A61K0031-5375 [I,C\*];  
                                  A61K0031-5383 [I,A]; A61K0031-54 [I,C\*]; A61K0031-54  
                                  [I,A]; A61K0031-542 [I,C\*]; A61K0031-542 [I,A];  
                                  A61K0031-555 [I,C\*]; A61K0031-555 [I,A]; A61P0017-00  
                                  [I,C\*]; A61P0017-06 [I,A]; A61P0029-00 [I,C\*];  
                                  A61P0029-00 [I,A]; A61P0031-00 [I,C\*]; A61P0031-00  
                                  [I,A]; A61P0035-00 [I,C\*]; A61P0035-00 [I,A];  
                                  A61P0037-00 [I,C\*]; A61P0037-00 [I,A]; A61P0037-06  
                                  [I,A]; A61P0043-00 [I,C\*]; A61P0043-00 [I,A];  
                                  C07D0239-00 [N,C\*]; C07D0239-00 [N,A]; C07D0265-00  
                                  [N,C\*]; C07D0265-00 [N,A]; C07D0279-00 [I,C\*];  
                                  C07D0279-00 [I,A]; C07D0293-00 [N,C\*]; C07D0293-00  
                                  [N,A]; C07D0333-00 [I,C\*]; C07D0333-36 [I,A];  
                                  C07D0333-38 [I,A]; C07D0333-40 [I,A]; C07D0417-00  
                                  [I,C\*]; C07D0417-06 [I,A]; C07D0513-00 [I,C\*];  
                                  C07D0513-04 [I,A]; C07D0517-00 [I,C\*]; C07D0517-04  
                                  [I,A]  
 PT 783507      IPCI      C07D0513-04 [ICM,7]; C07D0498-04 [ICS,7]; C07D0498-00  
                                  [ICS,7,C\*]; C07D0517-04 [ICS,7]; C07D0517-00  
                                  [ICS,7,C\*]; C07D0333-38 [ICS,7]; C07D0333-00  
                                  [ICS,7,C\*]; C07D0417-06 [ICS,7]; C07D0417-00  
                                  [ICS,7,C\*]; A61K0031-54 [ICS,7]; C07D0513-04 [ICS,7];  
                                  C07D0513-00 [ICS,7,C\*]; C07D0279-00 [ICS,7]  
                                  C07D0513-04 [ICM,7]; C07D0513-00 [ICM,7,C\*];  
                                  C07D0498-04 [ICS,7]; C07D0498-00 [ICS,7,C\*];  
                                  C07D0517-04 [ICS,7]; C07D0517-00 [ICS,7,C\*];  
                                  C07D0333-38 [ICS,7]; C07D0333-00 [ICS,7,C\*];  
                                  C07D0417-06 [ICS,7]; C07D0417-00 [ICS,7,C\*];  
                                  A61K0031-54 [ICS,7]; C07D0279-00 [ICS,7]; C07D0239-00  
                                  [ICS,7]; C07D0265-00 [ICS,7]; C07D0293-00 [ICS,7]  
                                  IPCR      A61K0031-54 [I,C\*]; A61K0031-54 [I,A]; C07D0333-00  
                                  [I,C\*]; C07D0333-38 [I,A]; C07D0417-00 [I,C\*];  
                                  C07D0417-06 [I,A]; C07D0498-00 [I,C\*]; C07D0498-04  
                                  [I,A]; C07D0513-00 [I,C\*]; C07D0513-04 [I,A];  
                                  C07D0517-00 [I,C\*]; C07D0517-04 [I,A]  
 ES 2201079      IPCI      C07D0513-04 [ICM,7]; C07D0513-00 [ICM,7,C\*];  
                                  C07D0498-04 [ICS,7]; C07D0498-00 [ICS,7,C\*];  
                                  C07D0517-04 [ICS,7]; C07D0517-00 [ICS,7,C\*];  
                                  C07D0333-38 [ICS,7]; C07D0333-00 [ICS,7,C\*];  
                                  C07D0417-06 [ICS,7]; C07D0417-00 [ICS,7,C\*];  
                                  A61K0031-54 [ICS,7]; C07D0279-00 [ICS,7]; C07D0239-00  
                                  [ICS,7]; C07D0265-00 [ICS,7]; C07D0293-00 [ICS,7]  
                                  IPCR      C07D0498-00 [I,C\*]; C07D0498-04 [I,A]; A61K0031-505  
                                  [I,C\*]; A61K0031-505 [I,A]; A61K0031-5375 [I,C\*];  
                                  A61K0031-5383 [I,A]; A61K0031-54 [I,C\*]; A61K0031-54  
                                  [I,A]; A61K0031-542 [I,C\*]; A61K0031-542 [I,A];  
                                  A61K0031-555 [I,C\*]; A61K0031-555 [I,A]; A61P0017-00  
                                  [I,C\*]; A61P0017-06 [I,A]; A61P0029-00 [I,C\*];  
                                  A61P0029-00 [I,A]; A61P0031-00 [I,C\*]; A61P0031-00  
                                  [I,A]; A61P0035-00 [I,C\*]; A61P0035-00 [I,A];  
                                  A61P0037-00 [I,C\*]; A61P0037-00 [I,A]; A61P0037-06  
                                  [I,A]; A61P0043-00 [I,C\*]; A61P0043-00 [I,A];  
                                  C07D0239-00 [N,C\*]; C07D0239-00 [N,A]; C07D0265-00  
                                  [N,C\*]; C07D0265-00 [N,A]; C07D0279-00 [I,C\*];  
                                  C07D0279-00 [I,A]; C07D0293-00 [N,C\*]; C07D0293-00  
                                  [N,A]; C07D0333-00 [I,C\*]; C07D0333-36 [I,A];  
                                  C07D0333-38 [I,A]; C07D0333-40 [I,A]; C07D0417-00

[I,C\*]; C07D0417-06 [I,A]; C07D0513-00 [I,C\*];  
 C07D0513-04 [I,A]; C07D0517-00 [I,C\*]; C07D0517-04  
 [I,A]  
 FI 9700318 IPCI A61K [ICM,6]  
 IPCR C07D0333-00 [I,C\*]; C07D0333-38 [I,A]; C07D0417-00  
 [I,C\*]; C07D0417-06 [I,A]; C07D0498-00 [I,C\*];  
 C07D0498-04 [I,A]; C07D0513-00 [I,C\*]; C07D0513-04  
 [I,A]; C07D0517-00 [I,C\*]; C07D0517-04 [I,A]  
 NO 9700350 IPCI C07D0513-04 [ICM,6]; C07D0513-00 [ICM,6,C\*];  
 C07D0517-04 [ICS,6]; C07D0517-00 [ICS,6,C\*];  
 C07D0498-04 [ICS,6]; C07D0498-00 [ICS,6,C\*];  
 C07D0417-06 [ICS,6]; C07D0417-00 [ICS,6,C\*];  
 C07D0333-38 [ICS,6]; C07D0333-00 [ICS,6,C\*];  
 A61K0031-54 [ICS,6]  
 IPCR A61K0031-54 [I,C\*]; A61K0031-54 [I,A]; C07D [I,S];  
 C07D0333-00 [I,C\*]; C07D0333-38 [I,A]; C07D0417-00  
 [I,C\*]; C07D0417-06 [I,A]; C07D0498-00 [I,C\*];  
 C07D0498-04 [I,A]; C07D0513-00 [I,C\*]; C07D0513-04  
 [I,A]; C07D0517-00 [I,C\*]; C07D0517-04 [I,A]  
 OS MARPAT 125:34158  
 GI



I

- AB The title compds. [I; A = O, S, Se; X = each (un)substituted C1-3 alkyl, C2-3 alkenyl, C2-3 alkynyl, or amino group, S, O; Y = O, S, NH; B = H, halo; C = H, halo, (un)substituted C1-6 alkyl; R1, R2 = H, a moiety that forms with the attached CO2 a readily hydrolyzable ester group] in equilibrium with its 4-hydroxy tautomer, and its pharmaceutically acceptable salts are prepared. Thus, 5-[2-(2-amino-4-oxo-4,6,7,8-tetrahydro-3H-pyrimidino[5,4-b][1,4]thiazin-6-yl)ethyl]-2-thienoic acid (preparation given) was condensed with H-Glu(OEt)-OEt.HCl using 1-hydroxybenzotriazole hydrate, (Me2CH)2NEt, and 1-ethyl-3-(3-dimethylaminopropyl)carbodiimide hydrochloride in DMF at 25° for 20 h to give the title compound di-Et ester I (A = Y = S, B = C = H, X = CH2, R1 = R2 = Me) (71%), which was stirred at 25° for 14 h, cooled to 0°, and adjusted to pH 3.5 with aqueous HCl to give 80% the title compound I (A = Y = S, B = C = R1 = R2 = H, X = CH2). The latter compound in vitro showed competitive inhibition of human GARFT with Ki value of 4.5 nM and IC50 of 16 and 4.3 nM for inhibiting the proliferation of L1210 murine leukemia and CCRF-CEM leukemia cells, resp. It at 12.5 mg/kg s.c. in vivo inhibited 100% the growth of lymphosarcoma 6C3HED tumor implanted in C3H/He female mice.
- ST aminooxotetrahydropyrimidothiazinylethylthienoylglutamic acid prepn antitumor; pyrimidothiazinylethylthienoylglutamic acid prepn antitumor; thienoylglutamic acid pyrimidothiazinylethyl prepn antitumor; glutamic acid pyrimidothiazinylethyl thienoyl prepn antitumor; glycineamide ribonucleotide formyl transferase GARFT inhibitor
- IT Neoplasm inhibitors  
 (preparation of N-[(aminooxotetrahydropyrimidothiazinyl)ethyl]thienoyl]glutamic acid derivative and analog as antitumor agents and glycineamide

11/245136

ribonucleotide formyl transferase inhibitors)  
IT 177575-16-5P 177575-17-6P 177575-18-7P 177575-19-8P 177575-20-1P  
177575-21-2P 177575-22-3P 177575-23-4P 177575-24-5P 177575-25-6P  
RL: BAC (Biological activity or effector, except adverse); BSU (Biological  
study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use);  
BIOL (Biological study); PREP (Preparation); USES (Uses)  
(preparation of N-[[[(aminooxotetrahydropyrimidothiazinyl)ethyl]thienoyl]glut  
amic acid derivative and analog as antitumor agents and glycineamide  
ribonucleotide formyl transferase inhibitors)  
IT 9032-02-4  
RL: BPR (Biological process); BSU (Biological study, unclassified); MSC  
(Miscellaneous); BIOL (Biological study); PROC (Process)  
(preparation of N-[[[(aminooxotetrahydropyrimidothiazinyl)ethyl]thienoyl]glut  
amic acid derivative and analog as antitumor agents and glycineamide  
ribonucleotide formyl transferase inhibitors)  
IT 50-01-1, Guanidine hydrochloride 107-11-9, Allylamine  
1066-54-2, Trimethylsilylacetylene 1118-89-4, L-Glutamic acid diethyl  
ester hydrochloride 10387-40-3, Potassium thioacetate 24424-99-5  
, Di-tert-butyl dicarbonate 26690-80-2 28868-76-0, Dimethyl  
chloromalonate  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(preparation of N-[[[(aminooxotetrahydropyrimidothiazinyl)ethyl]thienoyl]glut  
amic acid derivative and analog as antitumor agents and glycineamide  
ribonucleotide formyl transferase inhibitors)  
IT 62224-19-5P, Methyl 5-bromo-2-thiophenecarboxylate 89711-08-0P  
115269-99-3P, N,N-Bis(tert-butoxycarbonyl)allylamine  
155089-06-8P, N,N-Bis(tert-butoxycarbonyl)glycinal 177575-26-7P  
177575-27-8P 177575-28-9P 177575-29-0P 177575-30-3P 177575-31-4P  
177575-32-5P 177575-33-6P 177575-34-7P 177575-35-8P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(preparation of N-[[[(aminooxotetrahydropyrimidothiazinyl)ethyl]thienoyl]glut  
amic acid derivative and analog as antitumor agents and glycineamide  
ribonucleotide formyl transferase inhibitors)

=> d his

(FILE 'HOME' ENTERED AT 18:44:27 ON 26 JUN 2007)

FILE 'REGISTRY' ENTERED AT 18:45:16 ON 26 JUN 2007

L1 1332 S ALLYLAMINE  
L2 505 S L1 AND POLY  
L3 0 S METHYLCARBOXY AND L2

FILE 'CAPLUS' ENTERED AT 18:45:45 ON 26 JUN 2007

L4 3094 S AMINE AND PROTECTIVE  
L5 109 S L4 AND ALLYL  
L6 3 S L5 AND POLY  
L7 1966 S POLYALLYLAMINE  
L8 19 S L7 AND PROTECTED

FILE 'REGISTRY' ENTERED AT 18:50:26 ON 26 JUN 2007

L9 1 S 24424-99-5/RN  
SET NOTICE 1 DISPLAY  
SET NOTICE LOGIN DISPLAY  
L10 0 S POLYALLYLAMINE AND L9  
L11 0 S AMINE AND L9  
L12 1 S L9

for Connie

11/245136

FILE 'CAPLUS' ENTERED AT 18:51:28 ON 26 JUN 2007

L13 5391 S L9  
L14 76 S L9 AND ALLYLAMINE  
L15 6 S L14 AND WATER  
L16 9 S L14 AND(AQ OR WATER)

=> log y

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
37.51	151.33

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
-7.02	-24.18

CA SUBSCRIBER PRICE

STN INTERNATIONAL LOGOFF AT 18:52:31 ON 26 JUN 2007

for Connie